Dissertation Title

Stress in Midwifery : an empirical study

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Declaration

This work is original and has not been submitted previously in support of any degree qualification or course.

Stress

Stress in midwifery : an empirical study

Abstract

Objectives:
To examine stress amongst a group of midwives, and establish whether perceived occupational stress actually originates from sources not connected to the work environment. Although many research projects have looked at stress within the N.H.S. very little research has previously been done addressing midwives.

Setting:
Midwives working in an N.H.S. Trust maternity unit. The sickness rates amongst this group were believed to have increased during a recent period of organisational restructuring, with "stress" cited as the main cause for absence.

Design:
A random sample of one hundred midwives completed three questionnaires. One on basic demographic data, a second on stress analysis - *The professional life scale* (Fontana 1989), and a third on life style and experiences, which may contribute to stress and anxiety (Holmes and Rahe 1967).

Results:
Only 6% of midwives scored high on the stress questionnaire. 47% scored low and 47% scored moderately. However, 25% scored high on the life style and experiences questionnaire. The results indicate a predisposition to ill health as a consequence of stress and life changes. There was no correlation between stress and life change scores. High stress scores were not associated with life changes or problems exclusively at home. The replies may suggest a need to analyse personality and individual coping mechanisms as a predisposing factor in relation to stress.

Conclusions:
Stress was related to organisational change and also to home - work conflicts. Personality and/or individual coping mechanisms may be a major contributing factor in determining the way an individual perceives and copes with a potentially stressful situation. It is possible that the personality characteristics of the midwives are the most important determining factors for their perception of, and experience of, stress.

Whilst the total amount of life changes itself **does** seem to influence the stress level, the amount of change required to produce a physiological stress response in each person appears to be dependent on the individual's perception and coping mechanisms.

The sickness rate is measured by management every week, and the absence reported by staff as being due to stress has increased dramatically since the organisational changes were introduced. The current way of thinking within this and possibly other large organisations appears to be the employment of stress counsellors and staff support workers. From these results, this may not appear to be the most appropriate way to deal with the issue of stress.

Background and introduction

(For the benefit of the reader, a glossary of terminology is included at the end of this report.)

I am a midwifery manager working in a busy maternity unit, which forms part of a large, urban N.H.S. Trust hospital. The unit delivers approximately three and a half thousand babies every year.

In 1993 a government steering group headed by Baroness Cumberlege produced a report which detailed indicators and targets that maternity service providers should aspire to in order to improve the *continuity, choice, control and communication* for users of the service (D.o.H 1993). Initially, these targets had to be met within a five-year period. However, they have since been "down graded" from targets to guidelines and are no longer mandatory, but preferable. Following their publication, several differing patterns of maternity care were established throughout the country. In all cases, changes were required to the working patterns and practices of midwives.

The maternity unit involved in this study has embraced the recommendations more than most by being one of the few implementing team midwifery, and starting to introduce midwifery-led care. This has involved widespread changes to working patterns, salary scales, professional structures and midwifery practice in order to meet the Cumberlege proposals. It is currently considered to be at the forefront of midwifery developments. (Spitz 1999)

Alongside these innovative changes has been a perceived increase (by both midwives and management) in staff sickness and absence rates (See chapter 3). Sickness is

often believed by the staff and the organisation, to be due to stress and anxiety. It is widely held amongst the staff that they are all stressed due to continuous modifications in their working environment. It is commonplace to hear staff discussing how "stressed" they are, and how much stress everyone else is experiencing. However, many of the personnel employed have to juggle work with family commitments, are studying in higher education, and have to accommodate variable shift patterns. This study aimed to examine the extent to which internal and external factors may be influencing the stress levels perceived by the workforce. It is a descriptive study, not an analytical enquiry. The aim is to describe what has happened in the organisation, illustrate what changes have occurred amongst the staff, and suggest possible explanations and links between the two.

Organisational structure

The unit comprises the following departments:

- One delivery suite, where patients go when they are in labour.
- One high risk ward where problematic pregnancies are managed and women who have had complicated deliveries are cared for.
- One low risk ward where all "normal" or uncomplicated women and their babies are cared for.
- One ante-natal clinic and
- seventeen community based midwifery teams.

The clinic staff, senior midwives on delivery suite and staff from the "high risk" ward are all part of what is collectively referred to as "core staff". Core staff still undertake shift work, but the times they work and the nature of the work they undertake, are fixed and fairly rigid. There is little opportunity for flexibility in start or finish times. Their working

day is comparatively predictable, as they tend to stay in the same place with the same people for the duration of their shift.

"Team midwives" staff the seventeen midwifery teams. Each team has a mixture of full and part time workers totalling approximately five or six whole time equivalents. They provide total care for a set caseload of women and as such their working day varies as they pass through community clinics, hospital clinic, delivery suite and the wards to follow the women in their care. There is a degree of flexibility in their working times, but there is also an element of unpredictability in their working practices. They fully staff the "low risk" ward. Team midwives also periodically provide support to core staff on the high-risk ward.

Managerially, the unit has three midwifery managers who are each responsible for a third of the teams and a clinical area within the unit. For example, I personally manage five community teams and the ante-natal clinic services in the hospital. A "women's services manager" and "directorate manager" also supplement the management team.

Staffing levels

There are 147 midwives employed in the unit being studied. Some are part time workers and some are full time workers. The overall "whole time equivalent" midwifery staffing level is 121 midwives. There have been no problems with recruitment or retention of staff. Indeed, at times there is a waiting list of midwives wanting to join the organisation should a vacancy occur.

With the exception of the few very senior midwives in the core staff, team midwives are paid more than core midwives. This is to take account of their extra responsibility, and the demands for flexibility and commitment that their role requires. Promotional opportunities occur several times each year.

CHAPTER ONE

What is stress?

Stress is "psychological, physiological and / or spiritual discomfort that is experienced when environmental stimuli are too demanding or exceed a persons coping strategies" (Bernard 1991)

Definitions of stress are varied. However, the general consensus appears to be that a stimulus from the environment evokes a response within the body. When the individual is able to cope with this response, excitement and stimulation can occur and result in an increase in creativity and performance. This positive response is termed *eustress.* However, excessive, unmanaged or prolonged periods of stress can lead to physical and mental impairment. This is *distress.*

Anxiety, is a learned emotional response to a threatening situation, and like stress, within limitations is a normal part of every day life. However, problems occur when anxiety results from non-threatening situations, or as a result of an unrealistic fear. A psychological condition known as *anxiety trait*, exists where continual inappropriate and out of proportion responses to stimuli, result in life long, non-beneficial responses. Anxiety differs from stress in that in its extreme form, it is a recognised illness that is usually treated within the realms of psychiatry or psychology. Distress on the other hand is often not recognised and therefore not treated. Rather it may often be viewed by employers and colleagues as a weakness in the individual concerned. Anxiety state is seen as an internal personal problem, whereas stress is usually viewed as an external or environmentally based problem

(Goldberger & Breznitz 1982). Anxiety problems therefore often accompany episodes of distress.

The accepted notion in today's society appears to be that *stress is bad and can make you ill.* The terms *stress* and *distress* have become interchangeable and often indistinguishable within our modern vocabulary. Many research articles seem to support the notion that stress is bad. (H.S.E. 1993) However, the evidence is difficult to evaluate. Over 3000 articles on stress were published in 1997 (Payne & Horn 1998), but the validity of some of the findings is difficult to determine for several reasons. As has already been stated, confusion exists around definitions. "Stress", "distress" and "anxiety" are different terms that are often used interchangeably and sometimes inappropriately. Furthermore, the concept of stress is difficult to measure. Biological and psychological responses are both involved and present the researcher with complex problems when trying to measure them. Finally, results from these numerous inquiries often present the reader with conflicting conclusions concerning the incidence, cause, effect and most appropriate action concerning individual and work based stress.

Models of stress

Bernard (1865 - 1961) was a physiologist who believed that complex living organisms rely on interaction between internal and external environments in order to function. In essence, he believed that the maintenance of life is dependent on keeping the internal environment constant despite external changes. When an organism is threatened by an external challenge, a physical response is produced to counteract it. This theory forms the foundation of the modern concept of stress (Lovallo 1997).

Cannon (1935) developed Bernard's idea of maintaining internal stability and termed it *homeostasis.* He observed that sensory nerves are involved in communicating the

condition of the rest of the body to the brain. The brain then interprets this information and initiates various biological responses to counteract any deviation from the normal. Cannon did not confine his work to biological aspects but also considered psychological and social consequences of a failure to maintain homeostasis within the body. His theory is an example of stimulus-based theory.

Hans Selye (1956) used the term *stress* to represent any agent that posed a threat to the homeostasis of an organism, and *stressor* to refer to any factor that resulted in a biological stress response. For an event or situation to be a stressor for a particular individual, the person must appraise the situation as threatening and lack the coping resources to deal with it effectively. Through animal experimentation he observed that certain reactions always occur within the body in response to stressors. Although the stress response he detailed was profound, he maintained that it was necessary for the survival of the organism. However, he noticed that severe, prolonged exposure to stressors could result in disease. Selye (1983) distinguishes between distress - causing disease, and eustress having a positive effect on health. His observations are the basis of response-based theory.

There are weaknesses in the above theories; for example, viewing stress as solely a product of the physical environment (stimulus based theory) or exclusively as a biological response (response based theory). The interactional model of stress is a fusion of the theories outlined above. Here the emphasis is on the mismatch between the person and the environment.

Lazarus and Folkman (1984) proposed a popular conceptualisation of stress, the transactional model. The theory takes account of the dynamic nature of the relationship between the environment and the person. The person and the environment are viewed as separate components that are interrelated and mutually dependent. Environments influence people and people influence environments.

The model was explained by Cox and Ferguson (1991), who describe stress as a consequence of an individual appraising their environment and finding it difficult to cope with. The principle of the model is that stress is a personal, perceptual phenomenon rooted in psychological processes (Cox 1978). The theory is based on a supply and demand concept. To summarise, demand is determined by the external environment, and also by the internal physiological and psychological needs of the individual. The individual appraises their *perception* of the demand and their ability to cope with it. An imbalance at this stage results in stress. The consequences of failure will influence the perception of demand, and capacity to cope.

Lazarus (1991) describes the cognitive processes associated with stressful transactions as being on two levels. Firstly, on a macro level, emotional distress may be associated with the overall situation. Secondly, on a micro level, stress can result from a feeling of inadequacy when considering one's ability to cope or from the consequence of failure.

The model encourages us to view stress as the combination of personal issues, which change over time, as well as the resources that are available to assist the person in times of stress, which also change over time. The resources available will affect the way in which the initial stressor is viewed. Stress occurs when there is an imbalance between demand and resources.

Bailey and Clarke (1989) highlight the importance of individuality. They point out that an individual's perception of a situation plays a large part in determining whether or not the situation is stressful. Different people find different situations stressful at different points in their lives.

Stress - cause and effect

Stressful events are those which signify or initiate significant life changes in the individual experiencing them (Ross & Altmaier 1994). The Social Readjustment Rating Scale (Holmes & Rahe 1967) contains 43 positive and negative life events, which necessitate such changes. Each event is given a score and awarded a number according to the perceived amount of change, which that event requires. For example, divorce 73 points, pregnancy 40 points, and going on holiday 13 points. It is the accumulation of changes, which is believed to lead to stress. Contrary to Bailey and Clarke (1989) who emphasise individuality in accounting for stress, the model assumes that everyone experiencing the same event will encounter the same amount of stress as a result of it. Furthermore, the assumption is made that life events are equally stressful at all times. In reality, a pregnancy may be very stressful for a young, single, career woman that did not plan to get pregnant. The situation may be very different for a married woman who had been trying to have a family. However, the model is useful in highlighting the variety of events, which can lead to stress. It also emphasises that it is not only "negative" events, which promote a stress response.

An alternative perspective is presented by reversal theory (Svebak and Apter 1997). The theory advocates that we have essentially eight pairs of emotions. Each pair represents ends of a spectrum. Each range extends from a highly positive emotion, such as joy, happiness, pride, and fulfilment; to an opposite highly negative emotion. The negative emotions are of particular relevance to this study and are anxiety; boredom; anger; sullenness; humiliation; shame; resentment and guilt. Each of these emotions presents the

individual with a feeling that they need to change and seek out the more positive end of the spectrum. This unhappy and restless feeling is referred to as "tension" and a form of stress.

Effects of stress

Although the definition of, and causes of stress are contentious issues, the various effects that stress produces in the individual are less controversial. As has already been stated, humans posses a complex variety of control mechanisms to regulate the body and maintain homeostasis in response to environmental changes.

> *"A stressor is anything that throws the body out of homeostatic balance"* (Sapolsky 1994 p 7).

In addition to physical threats from the environment we often experience perceived threats and emotional angst resulting in psychological distress. This too results in changes within the body. Emotional distress leads to a rise in cortisol levels in conjunction with an increase in heart rate and catecholamine activation. These responses are internally generated and have numerous effects on the body. These effects are often associated with pessimistic emotion and may occur frequently in social settings. If repeated, they may have negative health consequences (Lovallo 1997).

When a person appraises an event as stressful, the body undergoes a number of changes that heighten physiological and emotional arousal. First, the sympathetic division of the autonomic nervous system is activated. This prepares the body for action by stimulating the adrenal glands to secrete catecholamines. As a result of this, the heart rate increases, as does the blood pressure. Blood is diverted away from the internal organs and the skin, towards the brain and muscles. The rate of respiration increases to facilitate an

increased intake of oxygen. This collection of events is often termed *the fight – or – flight response* because the body is energised to either confront or escape from a threat.

Another part of the stress response involves the hypothalamus and pituitary gland. These parts of the brain regulate hormone levels within the body. In times of stress, the hypothalamus directs the pituitary gland, which in turn influences the adrenal glands to produce cortisol. Cortisol enables the body to access stored fat and carbohydrate in order to fuel the fight –or – flight response.

A stressor occurs and the body responds. Some hormones are secreted and others are suppressed. The stress response is mobilised in response to a physical threat, a mental injury but also in anticipation of them (Saplosky 1994). The result is propensity to circulatory problems, digestive disorders, depression, growth abatement, immunosuppression, psychological dysfunction and general bodily decline.

The immune system and stress

The immune system involves various complex biological components. The success of the system relies on two-way communication between the brain and the endocrine system. Our behaviour and the activities of the immune system are inter-related and mutually dependent on each other.

Stress appears to affect the immune system in two ways. Firstly, when people experience stress, they have an increased inclination to engage in health compromising behaviours such as smoking; increased alcohol consumption; drug use; less sleep; poor eating habits and little exercise. Secondly, stress may affect the immune system directly as a result of hormonal changes. The surge in the levels of certain hormones produced in response to a stressor is believed to actively suppress the immune system.

Negative emotional distress has been associated with endocrine and autonomic changes that can impede the immune response (Lovallo 1997). The body will thus experience a decrease in resistance to infection and disease. Conversely, positive emotional experiences can enhance the immune response.

To summarise: -

Energy is mobilised from stores within the body, and sent to the tissues that may need it. In addition, long term bodily projects are halted. These include growth and repair, reproduction and immunity. The perception of pain is blunted and certain cognitions, for example some aspects of memory and the detection of senses such as noise, are sharpened. Long term or repeated exposure to these effects can have an adverse effect on physical and mental well-being. In extreme cases burnout may occur. Maslach (1981) describes burnout as a reduction in motivation; a negative attitude to one's job and other people; reduced sense of humour; a sense that choices are reduced and a feeling of loss of control.

Stress in relation to personality

Coping with stress means using thoughts and actions to deal with certain situations. People who cope well with stress tend to believe that they can influence what happens to them. People who do not cope very well with stress tend to have a negative, passive outlook on life (Clark et al 1984).

Bailey and Clarke (1989) stress the importance of individuality when addressing the concept of stress. In support of the transactional model outlined above, they assert that an individual's perception plays a large part in determining whether or not a situation is deemed to be stressful. Researchers now have a consensus of opinion, that five factors describe the basic dimensions of personality (McCrae and Costa 1990). These are:

1. Neuroticism
2. Extroversion – introversion
3. Conscientiousness
4. Agreeableness
5. Openness to experience

These five factors, plus some others, will now be discussed in the light of an individual's predisposition to stress and distress.

Type A behaviour

Friedman and Ulmer (1984) developed the theory of type A behaviour pattern. People with type A personality often exhibit several components. Firstly, there is a sense of urgency about their conduct. They are impatient and do more than one task at once, not wanting to waste time. Secondly, they are highly competitive individuals with a drive to

achieve. Thirdly, they often exhibit elements of hostility, and suspicion of others. Type A people are often easily angered. In contrast, type B personalities tend to be more passive, calm, less ambitious, tolerant and patient. Ross and Altmaier concluded that people with type A personality are more likely to experience occupational stress, and less likely to deal with it effectively, simply due to the way in which they view the world (Ross and Altmaier 1994). However, it could be argued that the personality characteristics of type A behaviour lead those individuals to strive for high-powered jobs with greater responsibility, and it is the jobs that these people do which increase their propensity to work based stress. There has been a great deal of research into how type A behaviour impacts upon stress and health. Many studies have suggested a link with coronary heart disease (Rosenman, Brand and Jenkins 1975; Helmer, Ragland and Syme 1991), although the most recent evidence suggests that these conclusions are ambiguous. There is however a wealth of evidence to support the assertion that Type A personalities experience stress more frequently and intensely than Type B personalities (Cinelli & Ziegler 1990; Nakano 1989).

Reversal theory

An alternative explanation for individual differentiation when dealing with stressful encounters is provided by reversal theory as described above (Svebak and Apter 1997). The theory maintains that personality differences are essential when analysing stress within the individual. In essence, the theory provides a typology of eight distinct psychological states of mind, which result from the position on the continuums of emotions outlined above. Svebak and Apter (1997) describe what they refer to as a "telic dominant" state which is characterised by serious, goal-orientated behaviour; the need to plan ahead; anxiety avoidance and the desire to progress and achieve. Baker (1988) showed that telic dominant

individuals were more likely to perceive events as threatening and thus experience stress. Murgatroyd (1981) has published similar clinical evidence.

Neuroticism and extraversion

There has been widespread investigation into personality traits and their inter-relation with stress and ill-health, including neuroticism and extraversion (Hills and Norvelle 1991).

The personality traits of extraversion and introversion were identified by Eysenck (1967). To summarise, extraverts are more likely to seek stimulation and social support, they are usually optimistic and act on impulse. They are fun loving, affectionate and require stimulation. Organisational change may be viewed by them as a challenge rather that a threat. The extravert will seek a diversion from the routine. Conversely, introverts are more likely to seek solitude. They have a disposition to be quiet, reserved and reflective. They avoid risks, and would view major organisational change with its associated social, psychological, professional and cultural upheaval and an enormous risk to themselves.

There is no doubt that neuroticism is the personality trait that is most strongly and consistently related to various symptoms of stress (Matthews and Deary 1998). Bolger and Schilling (1991) conducted research which involved subjects providing daily records of their stressful events and mood for a six week period. Emotional distress following various events was recorded in groups categorised as either high or low in neuroticism (N). The high N subjects showed accentuated emotional distress following the stressful events.

As with many other studies of personality traits and their association with stress related illness, the results are often ambiguous, for the reasons explained earlier in this chapter. However, it is clear that neuroticism is a personality trait related to the experience, or perception of stress.

Conscientiousness

This personality trait concerns the individual's ability to be well organised, and to focus on targets, goals and deadlines. The individual who scores high on this scale would be organised, reliable, hardworking, self disciplined, punctual, scrupulous, neat, ambitious and persevering. In contrast, a low score for conscientiousness would suggest a worker who was aimless, unreliable, lazy, careless, lax, negligent, weak-willed and hedonistic

Agreeableness

At one end of the spectrum for agreeableness we have the soft hearted, good natured, trusting, helpful and gullible employees who leave themselves open to abuse by the cynical, rude, manipulative, vengeful and irritable colleagues at the other end of the spectrum. The implications for interpersonal relationships, personal time, contentment at work, work load and stress are obvious.

Openness to experience

Again there are two ends of a continuum. At one end would be a curious, interested, creative, untraditional midwife eager to try new working practices and envelop change. At the other would be a conventional, narrow, predictable midwife who did not embrace disruption or change.

Hardiness

Kobasa (1982) developed a measure of hardiness intended to identify "stress vulnerable" and "stress resistant" individuals. Hardiness essentially has three components:

- belief in personal control over events
- commitment to full involvement in life
- enjoyment of challenge and opportunity

However, Kobasa's main prediction, that hardy individuals are less distressed by adverse life events, is poorly supported (Cohen and Edwards 1989); and hardiness has been confused with low neuroticism (Schaubroeck and Ganster 1991).

Optimism – Pessimism

Extensive studies have been conducted to look at stress in relation to the personality trait of optimism – pessimism. The findings suggests that there is evidence to support the hypothesis that optimism may predict reduced levels of stress even with neuroticism controlled (Scheier, Carver and Bridges 1994).

To summarise

A universally acceptable definition of stress is difficult to establish. The term is often used inappropriately in modern language. Numerous models have attempted to explain the origin of, and effect of stress. Undoubtedly, a combination of personal circumstances together with environmental issues effect an individual's perception of, and response to a specific situation. This perception and response may be greatly influenced by personality characteristics. It follows therefore, that in general, stress is inherently related to personality.

Occupational Stress- Definition and Cause

Parasuraman and Alutto (1984) identified three general categories of stressors found in organisational settings. These are contextual, role related and personal stressors. More recently, Summers, DeNisi and DeCotiis (1994) identified the causes of job stress as: -

- personal characteristics
- structural organisational characteristics
- procedural organisational characteristics
- role characteristics

If we agree with Bernard when he states: -

> *Stress is "psychological, physiological and / or spiritual discomfort that is experienced when environmental stimuli are too demanding or exceed a persons coping strategies" (Burnard 1991, p3),*

then it follows that occupational stress is the discomfort experienced from stimuli found in the workplace. Ross and Altmaier (1994, p12) define occupational stress as: -

> *"The interaction of work conditions with characteristics of the worker such that the demands of work exceed the ability of the worker to cope with them."*

Excessive or prolonged stress may have serious consequences for the organisation as well as for the individual, as physiological, psychological, behavioural and social reactions become affected.

Fontana (1989) affirms that the worker – boss relationship can be a great source of tension. If the "boss" or manager fails to give credit when it is earned, or fails to assist when

the employee is having a particular difficulty, this can lead to frustration, anger, feelings of isolation and distress. A niggling or constantly criticising superior is also a potential stress inducer. Self confidence is undermined by this approach, and creativity and job satisfaction may decline.

Just being part of a large organisation can present threats to the individual's sense of freedom and autonomy (Arnold, Cooper and Robertson 1998). Workers sometimes lose a sense of belonging or feel excluded from certain aspects of the running of the organisation. Participation in decision making within the organisation not only gives the employee a sense of belonging and personal value, but also improves communication channels. The overall result improves the well being of the work force (Sauter et al 1989)

Symptoms of occupational stress

The effects of stress are detailed above. Briefly, the symptoms of stress can be categorised into three groups.

Psychological symptoms: - this includes emotional and cognitive problems. Job dissatisfaction will predominate, with a dislike of going to work and little reason identified for doing the job well. Other symptoms include anxiety and depression; boredom and frustration; feelings of isolation and resentment. As the worker becomes increasingly withdrawn, he/she is less able to cope with work-based problem and a cycle of decline ensues (Ross and Altmaier 1994).

Physical symptoms: - there is evidence that links work based stress to cardio-vascular disease (Sutherland and Cooper 1990). There is also evidence to suggest a correlation with gastro-intestinal disorders such as ulcers.

Behavioural symptoms: - these include work avoidance, increased drug and alcohol consumption, aggression, eating disorders, and interpersonal problems. However, other

behavioural problems may exist which are of particular detriment to the organisation; for example, absenteeism, high levels of resignation from employment, poor performance and loss of productivity.

A stress response may be initiated or exacerbated by such psychological factors as a loss of outlets for frustration, reduced social support, perception of things worsening, lack of control and lack of predictability (Sapolsky 1994). Furthermore, when work based changes are implemented, social factors may also be affected. These include an alteration in the length of the working day; a change of work based colleagues and the implementation of different working hours. There may also be role ambiguity and interpersonal conflicts.

An environment of on-going change invariably presents the individual with new demands and expectations. These stimuli may increase the need for adaptation of psychological, physiological, spiritual and social coping mechanisms. Change can, therefore, precipitate an increase in stress and distress.

Consequences of occupational stress for the organisation

Absenteeism, employee turnover, and medical problems as a consequence of stress are direct costs to the employer. Further "hidden" costs often result as a effect of reduced productivity and poor customer service as a result of *"exhausted or depressed employees (who) are not energetic, accurate or innovative at work"* (Karasek and Theorell 1990)

Other organisational costs include potential litigation claims as a result of employees seeking compensation for work induced illness. There is no specific reference in legislation to the control of psychosocial hazards in the workplace. However, all employers have a duty of care to employees under the health and safety at work act 1974. The act implies that the control of working conditions likely to result in mental stress is included in

the employer's duty of care (Croner 1998). The well-publicised case of John Walker and Northumberland county council (The Times newspaper 1995) where he received substantial compensation for a second, work related breakdown due to excessive workload, illustrates this point. This was the first case where an employer's duty to provide a safe working environment was applied to hold the employer responsible for the mental injury to the employee. The high court held that the council was in breach of the duty of care owed to Walker.

Williams (1998) found that psychological ill health is the main cause of illness amongst N.H.S. staff. The extent of the problem was found to be reliant on managerial style, size of the organisation, communication strategies, support for staff, autonomy amongst staff, and the opportunity for flexibility in working practices. The largest study of stress amongst the N.H.S. workforce, found a prevalence of mental ill health within the midwifery profession of 25%, compared with 29% of nurses and 28% of doctors (Borrill 1996). However, the parameters for determining what exactly constitutes mental "ill health" are not clear, and so large-scale investigation using meta-analysis is difficult to undertake. It is estimated that 30 – 40% of all sickness absence from work is attributable to some form of mental or emotional disturbance (Croner 1998).

It must be considered that, no matter how much employees are involved in the decisions and change processes, some personnel will still find it very difficult to cope. This will result is distress and consequences for the organisation in terms of productivity, quality and standards. How the organisation deals with these individuals will influence the underlying culture within the establishment.

"A perception of stress, what ever the cause, and whether it is home or work related, by any individual or group of individuals, is likely to lead to poor performance, interpersonal conflicts, low morale and increased sickness absence"
Williams (1998, p3)

CHAPTER TWO

Literature Review

Although research into stress within the National Health Service has been extensive, research into stress amongst midwives has been notably sparse.

Stress within the N.H.S.

Williams (1998) found that psychological illness is the main cause of ill health amongst N.H.S. staff. The extent of the problem was found to be related to managerial style, size of organisation, communication strategies, support for staff, autonomy, and the opportunity for flexibility in working practices. As previously stated, the largest study of stress amongst the N.H.S. work force found a prevalence of mental ill health within the midwifery profession of 25%, compared to 29% of nurses and 28% of doctors (Borrill 1996).

Borrill (1996) concluded that stress within the N.H.S. was significantly higher than amongst the general population. She suggested that this was due to a failure to involve employees in the change process, high work demands, low influence on decisions, conflicting job demands, poor feedback on work performance and a lack of clarity about work roles.

Stress within midwifery

There have been evaluations of team midwifery, which concluded that midwives felt "burnt out" (Allen 1997; Watson 1998). Several authors have described burnout (Maslach and Jackson 1986; Schaufeli and Buunk 1996) as a syndrome amongst employees who

work with people, characteristic of emotional exhaustion, depersonalisation and reduced individual achievement. The employee feels psychologically drained, with negative attitudes towards their clients. Low self-esteem is another prominent feature. The implication is that burnout is a consequence of extreme stress.

A recent large-scale study (Sandall 1998), selected a 5% random sample of U.K. midwives (N = 1166). Information was gained concerning family circumstances, work and psychological health. The conclusions were few. On the whole, it was found that midwives working in teams, had less control over their decision making and work pattern than those in traditional models of care. The team midwives in the study were found to be on lower salary grades and worked longer hours. As a result of these factors, staff burn out levels amongst team midwives were increased. It was also concluded by Sandall, that the organisational structures that accompany team midwifery embody low levels of occupational autonomy, and this too contributed to burn out. One of the main causes of stress amongst midwives was working conditions rather than midwifery itself. However, it must be remembered that the interpretation of the Cumberlege recommendations (D.o.H. 1993) has resulted in a variety of "team midwifery" concepts that are not uniform throughout the country. Geographical and organisational variables would also add weight to the argument that a study of stress amongst a 5% random selection of midwives across the country may be inappropriate due to widespread variability in working practices.

There have been no other published studies of stress amongst midwives in Britain to date. Anecdotal reports and personal accounts of individual experiences can be found amongst the correspondence in professional journals, but these remain individualised and subjective. The validity and accuracy of such personal accounts is open to question. As such, they are not explored here.

Midwives and stress: A comparison with other occupations

Stress, can be viewed from the perspective of individuals, or a group of employees as a whole. When considering stress amongst midwives, as in this study, the focus is not on the individuals in that group, but the occupational group as a whole. Much research (detailed below) has been conducted on doctors and nurses within the health professions. Never-the-less, it could be argued, for the reasons explained below, that midwives should be considered differently.

One similarity between nursing and midwifery is the propensity for shift work. The resulting disturbance to circadian rhythms (sleep patterns; body temperature; gastrointestinal and hormonal function) is widely documented (Goldberger & Breznitz 1982). Shift work also has been shown to have a negative effect on domestic life, sexual activity and parental responsibilities (Tasto & Colligan 1978). Compounding the demands for shift work, the team midwives in this study also have an "on-call" commitment. This is not usually a feature of nursing, although it has similarities with the working patterns of doctors. In this situation, they may have already worked a full day, and may still be called out of their bed at night to attend a home birth. Shift work is common to both team and core midwives, and as such would be an unlikely explanation if higher levels of stress were to be found amongst one particular group of midwives. The role of the team midwife increases her professional autonomy, which in turn increases her responsibility and role ambiguity. The new way of working requires a change in multi-professional attitudes and culture. Unfortunately, this is unlikely to occur until team midwifery is firmly established and new role boundaries are cemented into the organisational culture.

Hingley (1984, p21) concluded that stress within the nursing profession was largely attributable to the nature of the work involved:

> *"No other profession confronts its members more harshly with the unending drama of human sickness and pain.....many tasks are mundane and unrewarding....distasteful, even disgusting. Patients are often difficult, frightened and resentful and nurses find a growing sense of irritability and frustration.. (These) feelings can arouse considerable anxiety and guilt."*

The extrapolation of this description to maternity care is questionable. The majority of cases have a happy ending, and although painful, the suffering of childbirth is an accepted part of reproduction and not viewed as symptomatic of disease and suffering. The role of the midwife rarely consists of "mundane" tasks and can usually be regarded as rewarding. Therefore the description above cannot be said to be true of midwives.

Further differences exist between midwives and other occupational groups. For example, several authors (Wallis & Cope 1980; Vredenburgh & Trinkaus 1983; Zwage 1985 and Linder-Peltz 1985) have identified role ambiguity as a source of conflict and stress within nursing. This is similarly very true for midwives, where the medical personnel, in particular general practitioners and junior Obstetricians, are often seen to encroach upon the role of the midwife. Often, one Consultant Obstetrician will delegate care to a midwife, which his fellow colleague would prefer to do himself. The midwife is completely accountable for the care she gives. She is trained to provide a quality service in all cases of "normal" pregnancy and childbirth, referring to a doctor when a deviation from the norm occurs. However, it is often the case that General Practitioners and Consultant Obstetricians encroach upon this role. This may lead to irritation, frustration and resentment on the part of the midwife. With the exception of specialised nurses (for example, MacMillan nurses or

those who have specialised in asthma or diabetes) who work in a "Nurse Consultant" capacity, the extent of this role ambiguity could be argued to be of greater prevalence in midwifery than in general nursing.

Another difference between the work of other medical professions and midwives concerns the working environment and unpredictability. In any one day a team midwife may work in hospital, in the community, in a clinic, in an operating theatre, in a delivery suite or in a patient's home, or a combination of all of the above. In the particular hospital studied here, all work as either "core staff" and are hospital based, or as part of a team of approximately six staff. The consequence of this close working relationship, particularly amongst the team midwives, is constant scrutiny of working practices and skills, knowledge and attitudes by fellow co-workers. Sapolsky (1994) believed that a stress response was initiated by a feeling of lack of control and unpredictability. This is certainly a feature of the team midwives' role. This is due to the fact that they have a defined case load as opposed to a task orientated working day. The potential for personal and professional conflict with work colleagues as a result of this close proximity is understandable.

On the whole, the midwife assists the woman and her partner in a joyous transition into parenthood. On occasions there may be sorrow, torment and distressing experiences. However, there is a marked difference in the relationship between midwife and patient, compared with that of nurse or doctor and patient. It can therefore be concluded that midwifery is unique, and the many studies into stress amongst the nursing professions cannot be extrapolated into midwifery.

When considering occupational groups, stress has also been attributed to poor status, poor pay and lack of promotional prospects (Fontana 1989). However, as the staff in the maternity unit studied here have received an "extra pay supplement" since the changes described have been introduced, the midwives examined in this study are actually better

paid than the vast majority of their colleagues working similarly throughout the rest of the country. There are regular opportunities for promotion and with the development of midwifery led care, the status of the midwife has also been enhanced.

Fontana (1989) goes on to state that uncertainty, often as a result of constant change in working practices and policies, is a major cause of work-based stress. Change has certainly been a prominent feature in the working life of the team midwives studies here, and, to a much lesser extent, the core midwives.

To conclude, for the reasons mentioned above, midwives and the way they work, can be considered as a unique occupational group with specific conditions not found generally amongst other work forces. The introduction of team midwifery may have served to exacerbate the differences. Research into this group is considerably limited.

One further aspect to be borne in mind, is the increasing threat of litigation that hangs over midwives in their every day practice. The public expect "the perfect baby", and when this does not happen, it is often the midwife, rightly or wrongly, who is blamed and may be pursued through the courts. This constant pressure and threat is an ever present part of the midwives' lives. The contribution that this aspect makes to their stress levels has not been assessed in this study, but would be an area for future investigation.

CHAPTER THREE

Charts are included as appendix six

Sickness Profile

According to Handy (1991), an important factor and indicator in identifying occupational stress and burnout is high worker sickness rates. It must be remembered that some staff may be reluctant to attribute sickness to "stress" as they see this as a weakness. Conversely, other staff may take time off work for other personal reasons, and prefer to tell their employer that they are off with stress. As stress has an impact on many health aspects, looking at the sickness rate as a whole, as opposed to just the sickness attributable to stress is important.

Sickness due to "stress"

Looking at the unit in this study as a whole, and including all grades of nursing and midwifery staff, the hours lost due to stress has increased greatly over the past five years (table one and chart one). Team midwifery was fully introduced in May 1998. Prior to this there had been a one and a half year "pilot" study introduced in 1996, where six of the eventual seventeen teams tried the new way of working. During the times of change, sickness attributed to stress has increased dramatically. However, due to pressure upon management to account for sickness levels, the number of hours lost for "unknown" reasons has reduced dramatically, and this undoubtedly has an influence on the final results. Muscular and gynaecology were the only other two areas to be reduced. It is possible that

the apparent increase in some conditions such as stress, cold and flu, are attributable to better reporting rather than an actual increase in incidence.

Year	Hours lost due to stress
95/96	257
96/97	1869
97/98	1035
98/99	1147
99/2000	6593

Table one: hours lost due to sickness on the maternity unit 1996-1999

Total sickness rate amongst midwives

During the first year of team midwifery (April 98 – March 99) the overall sickness rate for midwives only, averaged 8.45% [team midwives = 8.29%] of the total available working hours. However, on closer inspection, there was a peak of absence in November and December, during a flu epidemic. During the second year (April 99 – March 2000) the rate fell to 6.72% [team midwives only = 7.13%].

The seventeen teams are divided into three localities, each locality operating within a specific geographical area. The staff, patients, potential problems, life-style and management of each of the three localities vary considerably. Possibly as a consequence of one or a number of these factors, so do the sickness rates. This is clearly illustrated by chart two (appendix 6) and table two. With the exception of locality one, the sickness rate has fallen during the second year of working in the new system. This may be attributable to the midwives adjusting to the changes that they have encountered.

	Locality 1	Locality 2	Locality 3	Core staff
98/99	7.36%	5.25%	12.25%	8.88%
99/00	8.48%	4.4%	8.51%	5.5%

Table Two: Percentage of hours lost due to total sickness in each locality 1998-2000

As mentioned previously, change can result in stress; and stress can result in numerous health consequences. During the years 1998/1999, and 1999/2000 the main reasons given by employees for sickness absence are clearly visible in chart three (appendix 6) and the table below. They were:

	1998/1999 hours lost	1999/2000 hours lost
a) Accidents	1442	1925
b) Colds and flu and headaches	2066	4062
c) Surgery	1832	5110
d) Pregnancy / Gynaecological	2472	1471
e) Stress	1147	6593
f) Chest complaints	652	1636
g) Stomach complaints	782	1470
h) Unknown/unrecorded	19188	8390

Table Three: Reasons for sickness absence, maternity unit April 1998 – March 2000

Whilst there is no disagreement that stress has numerous manifestations within ill health, and has no doubt been a contributory factor in the amount of hours lost due to headaches, colds and flu; it seems improbable that the reasons given in many of the cases here can be credited to stress. The number of hours lost due to surgery is also high, and this is difficult to attribute to stress related issues. As stated above, the overall percentage of midwifery hours lost due to sickness is 6.72% (1999-2000). Stress was directly responsible for 19% of the total hours lost due to midwives sickness during this year. Although this level is high, the impression gained from the staff is that the level is much higher. This is supported by

the results of the stress questionnaire. Yet again, these findings would seem to support the conclusion that the *perception* of stress is much greater than the reality. The analysis of sickness trends should be viewed with caution due to the high level of sickness that is not attributed to a specific condition, and is reported as "unknown".

Midwives sickness compared to other health professionals

Remembering that stress accounted for 19% (6593) of midwives' sickness during the year 1999-2000, in the preceding year it accounted for 15% of the total sickness on the orthopaedic unit (3007 hours). This area has undergone minimal changes in practice when compared to some other units within the hospital. Similarly, the rate of sickness absence attributed to stress was 11% of the total sickness (6958 hours) on the department of medicine for the elderly. This is another area of minimal change in working practices. The rate was even higher at 16% of the total sickness (6705 hours) on the medical unit.

Chart four (appendix 6) and table four clearly demonstrate the *trends* of absence due to stress in several areas of the hospital.

	maternity	orthopaedics	D.M.E.	theatre	medicine
96/97	1869	722	6541	3128	4856
97/98	1035	2939	6729	2721	6005
98/99	1147	3007	6958	2733	6704
99/2000	6593				

Table Four: Sickness due to stress in several hospital departments 1996 – 1999

It can clearly be seen that the maternity unit has undergone a huge rise in sickness attributed to stress in the year following a period of change implementation; namely 1996 – 1997, and following the changes in 1998 there is a sharp rise during the year 99/2000. The department of medicine for the elderly experiences little change but a constant high level of stress related sickness. General medicine shows a progressive and steady increase, again in

an area where there is minimal change in practice, but other pressure over bed occupancy and acute illness in patients. This chart would seem to support the notion that stress is indeed related to change within the maternity unit. However, high levels of stress exist in other areas of the hospital that require an alternative explanation.

Several conclusions can be drawn from this data:

- The midwifery department has undergone extensive and radical changes to working patterns and practices over the past three years.

- These changes may have had an influence on the sickness rate.

- The sickness rate due to stress rose sharply in the year following the introduction of changes in working practices.

- Other departments, which have undergone minimal changes to their working lives, also have high sickness levels due to stress.

- Change in working patterns and practices do not appear to be solely responsible for absence from work due to stress. A multifaceted combination of features seems to influence stress sickness levels within each department of the hospital.

- The acceptability of sickness due to stress may vary between departments. It is difficult to analyse the data accurately due to the high level of unaccountable sickness.

The organisation and initiatives to support staff

Initiatives within the hospital studies have included:

- ✓ Expansion of the role of the occupational health department. No longer is the occupational health department viewed solely as processing the medical examinations of staff prior to employment. They now offer medical advice, a psychologist, counselling services and stress management training.
- ✓ Care and responsibility training. This offers all staff practical advice on anger management. It complements another course for staff entitled "Handling challenging behaviour".
- ✓ "People Matter" programme. This reinstates the basic components of courtesy and caring for each other into the culture of the organisation. It includes assertiveness training.
- ✓ "Spring Board" programme for women. This again incorporates assertiveness, and basic life skills training.
- ✓ Staff welfare officer. The staff welfare officer is available to provide support and advice to staff on a whole range of issues that may be of concern to them.
- ✓ Citizens' advice. A citizens' advice shop has been opened in the main foyer of the hospital. This is for use by both staff and patients.
- ✓ Stress buster days. Several stress buster days have been organised "off site" by the maternity directorate and facilitated by an outside agency.
- ✓ Debriefing sessions with a qualified counsellor are due to commence summer 2000, to enable staff to talk through difficult cases that they have been involved with.

CHAPTER FOUR

Research Methodology

Research methodology within the behavioural and social sciences divides mainly into quantitative or qualitative enquiry. Duffy (1987) explains that quantitative methods require measurable data such as those derived from a questionnaire. In these cases, the researcher remains detached from the subjects. In contrast, qualitative research involves observing and interpreting events by way of observational analysis or interview. The opportunity for bias may be greater in the latter approach, as the subjectivity of the researcher could possibly influence the results. Duffy goes on to discuss the merits of a quantitative approach as opposed to a qualitative one in a nursing speciality. Guba (1990) describes quantitative research as data-led, outcome-orientated and thus positivist. Whilst there are major advantages to incorporating both methodologies to gain a comprehensive analysis of a situation, in this case it was thought to be inappropriate. As the author of this study is the direct line manager of the participants involved, the validity of face to face interviews would be questionable. A quantitative approach was therefore chosen to reduce possible bias. Although limited, the accuracy of obtained results should be enhanced.

The line of enquiry chosen may be described as positivist. However, an operational hypotheses has not been used. There is a focus on observable facts, and a search for an explanation of that which has been observed. The concentration on explanation, prediction and proof, form the hallmarks of the positivist approach. The concept focuses on generalised laws of cause and effect. Positivism has been criticised as an instrument of control. If you observe, describe and explain a phenomenon then ultimately you may predict and control it.

The aim of this study was to produce a systematic investigation and observation into the prevalence of stress, the effect on the individual and possible sources both within and external to, the organisation that may be contributing to the problem. The investigation aimed to include large numbers of staff to provide a wide basis of evidence upon which legitimate conclusions could be drawn. Whilst semi-structured interviews and a qualitative approach may provide great in-depth data into individuals' circumstances, the aim here was to compare the team and core midwives as groups, and to look for similarities and differences within those groups. Interviews would be very time consuming and difficult to quantify. The question of bias with a qualitative approach has already been highlighted above. For all of these reasons, questionnaires were believed to be the most appropriate method of enquiry.

Ethical Issues

The study encourages staff to analyse their thoughts and feelings and asks them to address the issue of their stress, their self-perception, relationships with colleagues and superiors, life changes and problems they may encounter at work and at home. All this presents the researcher with ethical issues. Having opened the legendary "can of worms", what next? It could be argued that it is the responsibility of the researcher to pre-empt, and so deal with, the possible psychological aftermath of such self-analysis on the part of willing participants in their research. When embarking upon such a line of enquiry these aspects must be considered. The subject should not experience psychological harm as a result of agreeing to participate in the study.

All subjects who were invited to take part in the research were given an explanation of the purpose of the study, what the results would be used for and how they could obtain a copy of them. They were assured of their anonymity and every possible effort was made to

maintain it. No pressure was placed upon the midwives to complete the questionnaires. They had the right to decline to take part if they so wished.

Access to participants

The study was discussed with and approved by the Head of Midwifery services and Directorate Manager in the hospital concerned. Discussion also took place with the occupational health department, personnel department, and staff counsellor / psychologist. Having gained co-operation and support for the study, and a guaranteed line of self-referral for any midwife feeling that she required psychological support, approval was sought, and subsequently granted, from the hospital ethics committee. Finally, the rights of participants needed clarification.

Rights of participants

A covering letter was enclosed with the questionnaires inviting staff to participate in the study (appendix one), and explaining that they had been randomly selected. This letter guaranteed anonymity and gave sources of help and support should it be required. It also gave details of how a copy of the results and completed study could be obtained should any one wish to acquire them.

Quantitative research design

The aim was to collect large numbers of extensive and varied data in a consistent format. Whilst semi-structured interviews may have provided a greater qualitative database, the questionnaires provide measurable quantitative data. As mentioned previously,

interviews would need to be conducted by an impartial third party in order to maintain a level of validity and truth. This was not a feasible option.

There are many standardised questionnaires to choose from. Because data needed to be collected concerning demographic data, stress and life style, it was felt important not to employ lengthy questionnaires in any one of the three subjects. If staff were asked to spend a great deal of time completing large numbers of questions, then response rates may decrease. The format chosen provided the data required in the shortest format, whilst maintaining valid results. The validity and appropriateness of the assessment tools chosen are discussed in greater detail below.

All midwives working as "core staff" (n=37) and the first two out of every three "team midwives" on the alphabetical staff in post list (n=63) were invited to take part in the study. This gave an overall sample size of one hundred. The researcher believed that this figure was a reasonable representation of the staff employed. Midwives working in a "developmental role" where they rotated through both of these job descriptions on an intermittent basis were excluded. Firstly, these are often newly qualified staff that are experiencing their own unique problems in adapting to a new role and learning objectives. They are small in number and have specific learning and professional needs as well as personal requirements. Secondly, this group would distort any comparison between the two distinct groups being studied, namely the team midwives compared to the core midwives. If this small group who rotate on a three monthly basis were included, the comparison between the two groups would be skewed. Midwives on maternity leave were also excluded.

Three questionnaires were issued simultaneously by post. The first, titled ***about you*** (appendix two) collates basic demographic data; asks whether the individual is stressed; if so why; and what do they believe would help. The second, titled ***about your stress*** devised

by Fontana (1989) aimed to assess stress levels within the individual, self-perception, and self worth (appendix three). The final component titled ***about your life*** (appendix four) originates from the social readjustment rating scale (Holmes & Rahe 1967). This ascertained life events requiring change, both welcome and unwelcome.

Several researchers (Lovallo 1997; Sapolsky 1994; and Maslach 1981), have documented the consequences that prolonged or severe stress can have for physical and mental well being. Chapter three examines the sickness profiles of the midwives who work in the unit where this study took place. Individual sickness records for the respondents in this study are not accessible and would breach confidentiality. However, sickness profiles for team and core midwives, and comparable data from the period of time prior to the introduction of the new working practices described (May 1998) are available for comparison. This area has been examined in chapter three and will be revisited in chapter six.

Validity

Fontana (1989) asserts that stress scales are to be used as a guide or indicator only. They will give the user valuable information regarding stress levels, but he warns:

> *"Scores on stress scales must be interpreted cautiously. There are many variables which lie outside the scope of these scales but which influence the way in which we perceive and handle stress."* (Fontana 1989, p114)

Although the consequences of excessive stress are similar for most people, the individual's reactions can be very different. It must also be considered that stress levels will vary from day to day. Fontana's questionnaire is a quick and simple tool to give a general impression of the amount of stress experienced by the person. It is not

prescriptive or diagnostic. It is however, a useful indicator. The questionnaire used is included as appendix three. Points are awarded for what may be interpreted as a sign of a stress response. The higher the total number of points, the greater the stress level.

Holmes and Rahe (1967) attempt to quantify the stress resulting from different life events and changes. Their questionnaire has been described as a:

"Crude index of the cumulative experience of change"(Fisher 1986).

Initially, Holmes and Rahe generated a list or scale, by asking medical patients to describe stressful life events they had experienced in a period of several months prior to becoming ill. The results showed that 43 different life events were frequently cited by the patients. Since its conception, the scale has been used many times over the years and various minor adaptations have occurred in order to ensure its relevance to the population upon which it was used. The format used for this study was believed to be pertinent to the subjects who participated. It included most relevant life changes that they may have experienced. The scale provides the researcher with a score of *life change units*. These scores have been linked to illness occurrence both retrospectively and prospectively (Birly and Connolly 1976; Rahe 1972). There is a fairly consistent pattern, with a significant increase in life change units (LCU's) one or up to two years before the occurrence of an illness. In the case of ischaemic heart disease, the number of LCU's doubled in the three months prior to the condition (Theorell 1970).

One study (Rahe 1975), using Holmes and Rahe's scale, examined the relationship between naval personnel on three ships during a six month cruise. Before the cruise, each subject reported their life changes experienced in the previous six months. At the end of the cruise, the sick bay records of the sailors were compared with

their life change scores. A direct correlation between high life change scores and a high number of sick bay visits was found.

Another study compared the death rates of 4500 widowers over the age of 54, with death rates of married men of the same age. The death rates of the widowers increased over 40% in the first six months of bereavement and remained elevated for several years after (Young, Benjamin and Wallis 1963). Similar findings have been reported in many subsequent investigations (Kapiro, Koskenvuo and Rita 1987; Stroebe and Stroebe 1987). Many researchers believe that grief can be an emotional trigger that combines with biological factors to cause death (Engel 1971; Lynch 1977).

The scale has greatest predictive power in the case of major illness. It is a crude indicator of the degree of change a person has experienced in their life in a given time frame. It has also been widely used in retrospective and prospective studies with a high degree of significance. It is quick and easy to complete, and appears to give valid results.

To conclude, whilst the validity of both of the assessment tools have been questioned, they are useful indicators and provide the researcher with an overview of the subject intended. They have both been used previously, in many different environments, and have provided an insight into the subjects of stress and life changes. If used as they are intended, "*crude indicators*", then they provide a legitimate form of inquiry.

CHAPTER FIVE

Results

The results of this investigation will be presented under the following categories:

1. All replies – a summary of results from all respondents. Demographic data. Overview of replies.

2. Respondents who perceived themselves to be stressed

3. Midwives who believed that they were not stressed

4. Midwives with mild and moderate stress scores

5. Midwives for whom stress is problematic.

6. Where does the stress come from?

7. What effect does stress have on the midwives?

8. High life event scores – an analysis

1) All replies

Demographics

A total of one hundred questionnaires were issued. 63 team midwives were invited to take part in this study, 51 replied (a response of 79%). 37 core midwives were invited to participate and 21 of those replied (a response rate of 59%). This gave an overall response rate of 72%, 70% of the total replies being from team midwives. There was a variety of age distribution amongst the respondents (table five) with full and part time workers incorporated into the categories of both team midwife and core midwife (table six). 65% of the total respondents worked full time.

<25yrs	25-29yrs	30-34yrs	35-39yrs	40-44yrs	45-49yrs	>=50yrs
1	4	18	10	12	11	16

Table five: age of midwives who replied

	Full time	Part time
Team	30	21
Core	17	4

Table six: job description of respondents

54% of the total respondents had children. Table seven clearly shows, that whilst child distribution may have been fairly even amongst full and part time workers, (n=19 and n=20 respectively), the *proportion* of part time workers with children at home is greater. Children were also more common amongst team midwives.

	Children at home	No children at home
Full time	40%	60%
Part time	80%	20%
Team	63%	37%
Core	33%	66%

Table seven: distribution of children

Stress scores

The vast majority (76%) of midwives did perceive themselves to be "feeling stressed". This finding supports the original assumption, that the majority of staff within the unit felt that stress was problematic (Page 3). However, analysis of the replies showed that amongst both team and core midwives, it was the full time workers who were less likely to *feel* that they were stressed. The reason for this is not clear. One possible explanation could be that the part time workers were more likely to have children at home, as illustrated in table seven, and so be juggling work and home commitments. 25% of total replies indicated that this duality of role and possible conflict of demands could be a cause of stress. However, on closer examination, 58% of these replies were from part time midwives, all of whom had children at home. The full time workers who believed that this was an area of possible stress made up 42% of the replies to this question. Of these, (n=10) six had children at home and four did not. It would appear that children and the resulting demands made upon the working parent, increase the perception of stress.

When asked what they believed caused their stress, *workload* was the commonest reply. This is an interesting belief on the part of the midwives. During the past five years, the maternity unit in question has had a falling rate of deliveries and a rising rate of staff. The number of midwives to patients per year is greater now than it has been since the unit first opened over a decade ago. Admittedly, the knowledge that the midwife is expected to have has increased. Advances in screening programmes, such as the introduction of

Hepatitis and H.I.V. screening, together with advances in information technology, have all increased the knowledge that the midwife is required to have in order to perform her job satisfactorily. Even so, the birth rate is approaching half of that ten years ago, and the number of staff employed has increased significantly.

Conflict between work and home commitments was the second most popular answer, and has been discussed at length above.

Conflict with work colleagues and *personal life* were other reasons given for feeling stressed, having fairly equal weighting as illustrated in chart five (appendix 6). Fourteen midwives in total reported conflict with work colleagues. The distribution of these replies reflected the overall sample composition. There were no areas of age, job description or full/part time working hours that seemed to be related to the answers given. For example, two thirds were team midwives, three quarters worked full time. No significant conclusions can be drawn from this analysis of conflict.

Insufficient knowledge: nine midwives reported an insufficient knowledge to cope with the changes. Anecdotally, it is often the part time staff who report a difficulty in this area, because they are not at work as much, and feel that they often miss out on training opportunities. Interestingly, in this study, 78% of midwives who reported insufficient knowledge to cope with changes were actually full time staff. All of these staff had a perception of being stressed. 56% were team midwives, and 44% core. The core staff have experienced considerably fewer changes in practice when compared to the team midwives. 89% of this group (insufficient knowledge to cope with changes) believed that their workload was problematic. A third of the group were over 50yrs of age. Two thirds did not have children at home. It is difficult to draw conclusions from these observations. However, the anomaly between the perception and reality of part time staff keeping up to date is of interest.

An area was provided for free text, where respondents could add their own comments, and identify any areas which they believed had not been covered. All of the free text replies were easily attributable to one of the categories above, and seemed to reinforce their feelings on this matter. Some of the comments are included below.

> Too much to do!
>
> Home and children make me stressed, I find it difficult to cope with it all.
>
> Working and studying cause my stress, not enough time in the day
>
> Workload is a problem, not enough time to do everything
>
> Colleagues are lazy, this makes me stressed. They lack commitment!
>
> Changes are happening too often. Too much to learn all the time.
>
> Personal changes are the cause of my stress.

When considering what would help midwives to cope better with stress, *support from the organisation* was the most popular reply (32%), with *more flexibility in working times* (26%) and *support from colleagues* (24%) making up the majority of other replies. Team midwives have been given a degree of flexibility in their working times. However, in reality, few of them appear to take the opportunities presented to them. For example, from observation, their first patient may not be due in clinic until 09:30, but they still arrive at work at 08:30, and then chat or do paper work. This is possibly because it used to be their usual or standard start time.

Life events

16% of total respondents had experienced the death of a close family member, and 12% had suffered significant ill health themselves. A quarter had experienced a change in sleeping habits in the past six months.

Holmes and Rahe (1967) interpret the life event score as follows:

- less than 150 presents no problem
- 150-300 carries a 51% probability of illness within the next two years
- over 300 carries an 80% probability of illness within the next two years

Sixteen (22%) of respondents scored between 150 and 300 on this scale. Two scored over 300. An analysis of the respondents with high life event scores appears at the end of this chapter.

2) Respondents who perceived themselves to be stressed

Demographics

As discussed in detail above, 55 of the 72 replies (76%) indicated a ***perception*** of stress. When looking more closely at who these midwives actually were, 62% were full time workers; 76% were team midwives; only 57% had children at home and 72% were married or living with a partner. Half of those feeling stressed were team midwives with children. One quarter were team midwives with no children. 16% were core midwives with children and the remaining 9% were core midwives without children. It has already been ascertained that children may increase the perception of stress in the discussion above. These results would seem to suggest that team midwives also have a propensity to feel stressed.

Stress scores

The perception of being stressed and the actual amount of stress as judged by Fontana's questionnaire demonstrate some disparity. Fontana (1989) quantifies the scores on his *professional life style* questionnaire as:

- 0-15 indicating minimal stress
- 16-30 indicating moderate stress
- 31-45 stress is problematic (Severe)
- 46-60 stress is a major problem

In this study, 47% of midwives fell into the "minimal stress" category, with an average score of 11. This group will be discussed in greater detail later. A further 47% fell into the "moderate stress" category with an average score of 22. Only 6% were categorised into the "stress is problematic" group. Their average score was 32. Again, this group will be discussed in greater detail later. This evidence would seem to support the theory that the amount of stress according to Fontana's analysis is actually less than the perception of stress.

It is difficult to extrapolate from these scores an interpretation of the level and consequences for such a degree of stress. However, Fontana asserts that scores in the "stress is problematic" group necessitate immediate action.

Life events

There was no apparent association between the people who *perceived* them selves to be stressed, their stress scores or their life event scores. Neither were any of their scores proportionately higher than the rest of the respondents. However, when looking at this group more closely, several interesting features are apparent. Various life events have

occurred in the group who *perceive* them-selves to be stressed that have not occurred in the group who did not feel stressed.

Four respondents in total had experienced divorce or separation from their partner. All four of these people perceived them-selves to be stressed, although two of them actually had very low stress scores. Sexual difficulties, death of a friend, moving house or taking on a mortgage and change in sleeping habits were all features exclusive to the group who perceived them selves to be stressed.

89% of the people who had increasing arguments with their partners also fell into this category. It would seem that although the overall stress or life style score was not significantly higher in this group, compared to the group who did not feel stressed; certain features, as detailed here, seem in increase an individual's *perception* that they are stressed.

3) Midwives who believed that they were not stressed

Demographics

24% of total respondents *perceived* that they were **not** stressed. Over three-quarters of these were full time workers.

Full time workers

Looking more closely at the full time workers who did not feel stressed, 48% of them had children living at home. There was a fairly even distribution between team and core midwives, and age distribution. 69% were married or living with a partner.

Part time workers

Proportionately fewer part time workers felt that they were not stressed. 75% of them were in the over 50yrs age bracket. All were married or living with a partner. 75% still had children living at home. Again, there was an even distribution between team and core staff.

There are no obvious conclusions here as to what can help an individual to believe that they are not stressed. It is possible that some other feature, such as personality traits, may be a factor. This will be discussed in greater detail in chapter six.

Stress scores

Despite not reporting a feeling of being stressed, a quarter of this group scored moderately high on the stress score. When asked what helped them to deal with their stress, 85% of full time staff replied *support from the organisation and management* and 77% replied *support from colleagues.*

Like the full time workers, part time staff also stated that they believed *support from the organisation and management* and *support from colleagues* were the greatest contributing factors in coping with stress.

One obvious feature here, is that midwives who perceive them selves to be stressed also feel unsupported by the organisation. Conversely, midwives who *perceive* that they are not stressed, believe that it is organisational support that is the main feature in helping them. The importance of organisational support in the *perception* of stress will be discussed further in chapter six.

Life events

A quarter of midwives who did **not** feel stressed scored moderately high on the life events scale, and thus had experienced significant changes in their lives over the previous six month period. In this group, therefore, the amount of change in their lives was not proportional to their perception of stress. Again, personality characteristics may be a contributing factor here. However, it is possible that the validity of the assessment tools used could be questioned.

4) Midwives with mild and moderate stress scores

Demographics

A comparison between the mild and moderate stress groups may be enlightening. Both categories showed a fairly comparable age distribution, which was representative of the age distribution as a whole. It seems from this that age is not a relevant contributory factor to stress levels.

In both groups a quarter to a third of replies were from single / separated midwives with the majority being married or living with a partner. Again, this mirrors the overall sample selection.

51% in the "moderate" group compared to 61% in the "mild" group had children at home. Again, this factor does not seem to be a major contributor to the stress score.

Job description in each of these two groups varied slightly. 22% of midwives who were moderately stressed were core midwives, 78% team. This compared to 38% core and 62% team in the minimal stress group. It may be that job description is one possible work based explanation for the level of stress measured in this study. Overall, the team midwives feature more prominently in moderate and severe stress categories. Whether the employee worked full time hours or part time hours was not a significant factor. There was a comparable distribution of full and part time staff in both groups.

Stress scores

92% of the moderately stressed group perceived themselves to be stressed, whereas 62% of the mildly stressed group perceived themselves to be stressed. This would suggest two things. Firstly, in a moderate amount of stress; in contrast to the severely stressed

group; the problem is recognised. Secondly, the perception of stress is probably higher than the reality as judged by the Fontana instrument.

Life events

There was no notable difference in the life event scores between the mild and moderate stress groups.

In summary

It is difficult to compare the prevalence of stress in this occupational group with previous studies, (Williams 1989; Borril 1996; Sandall 1998) due to differences in research methodology and definitions of stress. However, 47% of this group were not classified by Fontana's questionnaire, as having a significant degree of stress. A further 47% were suffering from moderate stress with only 6% severely stressed. Life event scores as judged by Holmes and Rahe do not appear to be a relevant factor in influencing the amount of stress measured here.

5) Midwives for whom stress is problematic

Demographics

Four replies (6%) were in this category. It is difficult to extrapolate conclusions due to the small numbers. However, looking more closely at this group, three of them were in the age range of 30-34yrs. Half were single; half were married or living with a partner. Half had children, half did not. Two were part time team midwives, one full time team midwife and one full time core midwife.

Stress

Two out of the four did not perceive themselves to be stressed and, if Fontana's questionnaire is valid, this is an individual and organisational cause for concern. If stress levels can reach the point of being potentially problematic to health without the individual concerned recognising the situation, severe consequences for physical and mental well being could ensue.

When examining the stress questionnaire replies from this small group, a number of features become evident. 75% indicated that:

- they can seldom do anything right
- they have difficulty getting to sleep at night
- inability to unwind
- frequent waking during the night or early mornings
- inability to stop thinking about problems or the days events
- work habitually exceeds time available
- unsettled conflicts with colleagues exist most of the time
- hardly ever look forward to going into work
- feeling that they are inadequately valued at work

In addition, all respondents indicated:

- tiredness and lack of energy
- inability to say "no" when asked to do something.
- Lack of time to spend on themselves

None of the respondents felt:

- within professional limits, they could speak their mind to their "boss"

Again, the influence of the organisation is evident here. These results above also suggest the possibility of a low level of morale within this small group. This is an area for further investigation.

Life events

Life events scores on the Holmes and Rahe (1967) scale were significantly higher than average in three out of the four cases. It is difficult to draw any conclusions from demographic data about this group, partly due to the low numbers involved. However, the high life event scores may indicate that activities external to their work environment are contributing significantly to the amount of stress in this group, even though they may be unaware that they are actually stressed.

In this group of four replies, the life event scores were:

a) 106 b) 271 c) 246 d) 421

Although the number in this category is small, it seems reasonable to conclude that the high level of stress could be due largely to factors external to their working environment. The result, according to Holmes and Rahe, would be a great propensity to illness amongst these midwives within the next two years.

On closer inspection, three of the four midwives in this group were experiencing an increase in arguments with their partner, three had taken on a new mortgage, two had moved house and two had experienced the death of a close family member. All had suffered a change in their sleeping pattern in the past six months, and three of the four had altered eating habits. Also, team midwives feature more prominently than core midwives. Larger scale studies may corroborate these findings. These results will be discussed more fully in chapter six.

6) Where does the stress come from?

Stress amongst the severely stressed group has been discussed in detail above. This section will investigate the *cause and effect* of stress amongst the moderate and severe group combined. This category makes up 53% of the total respondents.

Work related stress

62% of this group have an *inability to say "no" when asked to do something,* and 52% felt that the work they had to do habitually exceeded the time available to do it. This could provide one possible explanation as to why this group are stressed. Only 48% felt that they could speak their mind to their boss. This difficulty in communication is inevitably going to impact upon their working life and their stress levels.

21% had unsettled conflicts with colleagues. Again, this may be a communication issue, but it is difficult to determine whether the stress contributed to the breakdown in communication or the communication breakdown accentuated the stress level.

71% had a clear picture of what was expected of them professionally, but unfortunately, 48% hardly ever looked forward to going into work. 74% feel inadequately valued at work. Stress appears to be slightly more common amongst the team midwives, and this may possibly be due to the extensive change in working practices and conditions that this group have experienced over the past two years. However, it may also be due to the unpredictability of their working day, or the close scrutiny of their work by fellow team members. Whilst core midwives have experienced some change also, it is the team midwives who have modified their working life the most. This aspect will be discussed more fully in chapter six.

Factors external to work that may be affecting stress levels

Only 16% of this stressed group had enough time to spend on themselves. This again supports the suggestion, that stress may be originating from home life as well as working life. It would also appear that moving house and/or taking on a new mortgage cause a great deal of stress, as does the death or severe illness of a close family friend / relative.

Having examined the extent of stress, and who were affected, an analysis will be made of the nature and effect of stress amongst the midwives in the study.

7) What effect does stress have on the midwives?

As expected, the midwives who were stressed indicated several aspects of sleep disturbance and an inability to "switch off" from work at night, and unwind. 26% admitted to feelings of being *hounded, trapped or cornered* (on Fontana's stress questionnaire).

When asked on the stress questionnaire to indicate on a scale of one to five, how much they liked themselves [one being "least like" and five being "most like"] only 17% choose number two. No one choose number one. So, despite being stressed, with little time to spend on themselves and often in conflict with colleagues, their partner and their boss, this group of staff report that they generally tend to still like themselves!

Relationships at home and at work may be suffering as a consequence of stress. However, it is possible that this conflict and breakdown in communication is the actual cause of the stress experienced.

8) High life event scores: an analysis

As detailed above, Holmes and Rahe (1967) assert that a life event score of 150-300 carries with it a 51% probability of illness within the next two years. Scores over 300 carry

an 80% probability. The effects of stress are well documented and the impact on health is not under question. However, if Holmes and Rahe are correct, then life changes also have consequences for health. Even positive or welcome events that result in a change, can accumulate to have a serious impact upon the health of the individual. This being the case, it is not only the level of stress as measured on the stress questionnaires which is of concern, but also the amount of life changes and the resulting life style score on the Holmes and Rahe scale.

25% of the total respondents scored over 150 on the life events scale. Looking at this group more closely:

- Almost half fell into the 30-34 year age bracket.
- 72% were full time workers
- 66% were team midwives
- 66% had children
- 72% had a partner / husband
- 78% felt that they were stressed
- 62% of this group had moderate or severe stress scores.
- The main reasons given for the stress experienced were:
    i. 50% had work: home demand conflicts
    ii. 56% believed that workload was a problem
    iii. 39% had problems with their personal life

Assuming that both the Fontana and the Holmes and Rahe assessment tools are valid, the combination of high stress scores, which are known to be detrimental to health and well-being; combined with the high life event scores which Holmes and Rahe also maintain

has a detrimental effect to health, provide a serious cause for individual and organisational concern.

Only 22% of this group did not feel that they were stressed. On investigation, three quarters of these respondents did in fact have a low stress score (less than 15) and the overall average stress score for this entire group was 12. Again, the issue of personality and coping mechanisms is highlighted here. Even though these midwives have experienced significant life changes and an accumulation of events requiring adaptation, they have coped and adapted. They do not feel stressed, and further more, they seem to be right. Their stress scores are low.

CHAPTER SIX

Discussion

This study has highlighted many issues and the discussion of these will be formulated under the following headings:

1) The main causes of stress in this occupational group

2) Transactional models and reversal theory revisited: a possible explanation of the results.

3) Individuality as an explanation for stress: the contribution of personality and individual coping mechanisms on stress levels

4) The effects of stress analysed

5) The organisation's initiatives to support staff

1) The main causes of stress in this occupational group

Selye (1956) used the term *stressor* to describe a factor that resulted in a biological stress response. From the results of this study, the main stressors for this group of employees are:

a) An inability to say "no" and an excessive work load.

Almost two thirds of the stressed group reported an inability to say "no" when asked to do something. Over half felt that the work they had to do exceeded the time available to do it. Inevitably, this inability to say "no" will have an impact on their workload. Researchers now have a consensus of opinion, that five factors describe the basic dimensions of personality (McCrae and Costa 1990). These will be discussed in greater detail later. However, one of the five factors is *agreeableness*. It concerns the extent to which someone is eager to co-operate and avoid conflict. These "willing" people may be targeted by superiors to undertake extra work, because the superiors know that they will not refuse. Further evidence comes from the fact that less than half felt that they could speak their mind to their boss, and almost three quarters of this group feel undervalued.

Fontana (1989) describes people who find it hard to say "no" as possibly lacking in self confidence, or lacking confidence in their own judgements. He goes on to explain that they are often anxious and afraid that people will think badly of them if they refuse to do as they are requested. There is an inability to clearly understand their own ability to perform tasks effectively – unable to determine how many tasks to take on. Added to this, they may feel guilty if they refuse to help. Finally, they often feel inferior to other people and see them as having authority over them.

Again, personality characteristics and individual coping mechanisms may explain individuals' work load and their inability to say "no" when asked to take on more. This lack

of assertiveness may be contributing to their overall level of stress by increasing their workload and frustration.

b) Inadequate personal time

84% of the stressed group felt that they had inadequate time available to spend on themselves. In the small subgroup, which scored very high on their stress scores, all of them declared that they had inadequate time for themselves. This may be due to workload as detailed above. It may also be that they spend their time doing things for others as a result of their "inability to say no". The fact that they do not make time for themselves, to unwind and possibly "pamper" themselves occasionally, may indeed be compounding the level of stress which they experience. It is now the norm for women to juggle work and home commitments. If this occurs to the detriment of personal time to the extent evident in this group, then demoralisation, reduced self worth and subsequent psychological ill health are predictable.

c) Team midwifery / change

The evidence here suggests that the team midwives are more stressed than the core midwives. Three out of four of the severely stressed group were team midwives. Also, team midwives made up the vast majority of the moderately stressed group. The team midwives have undoubtedly undergone considerable, ongoing change. The introduction of this radical change was clearly associated with a 637% increase in sickness due to stress compared to the previous year.

Change is an ever present feature of organisational life. The way in which change is managed, and the appropriateness of the methodology adopted, have primary implications for the perception of the outcome and the experience of the change process. Borrill (1996)

suggested that stress was attributable to a failure to involve staff in the change process and decision making. In this case the staff were extensively involved. Indeed the push for the expansion of the original "pilot project" came from the staff themselves. The influence that the staff had in the decision making process was also high. They were all asked which area they wanted to work in, and on the whole, their choices were met. All staff have an annual appraisal with their locality manager, which is generally conducted in a constructive manner. Goals and objectives are set jointly following discussion of individual and organisational needs. Teams meet amongst themselves socially on a regular basis, and formally with their locality manager at least once a month. This is to facilitate communication and feedback.

Whilst several researchers have offered explanations for organisational stress in relation to working practices (Fontana 1989, Linder-Peltz 1985, Hingley 1984) they do not seem applicable to the group studies here. Other research connecting stress to the method of change implementation (Borrill 1996) also seems unrelated to this case. In this study, it appears that the fact that a change has taken place at all, is the determining factor. The accumulation of individual, personal and organisational changes, which have inevitably been greater for the team midwives, have resulted in an increased level of stress. This supports the views already highlighted of Holmes and Rahe (1967) and Ross and Altmaier (1994).

Many researchers (Kapiro, Koskenvuo and Rita 1987; Kapiro, Koskenvuo and Rita 1987; Stroebe and Stroebe 1987) have highlighted the impact that "grief" can have on coping mechanisms and stress. Grief may be explained as a sorrow or sadness, usually associated with a loss. In the case of the team midwives, many of them lost the long established working practices, colleagues and life style that they had been used to for many

years. It could well be that there is an element of grief amongst some of them. This may, in turn, be affecting their ability to cope with stressful situations.

To summarise, the main causes of stress in this occupational group, can be categorised as follows:

Work related stress

- The inability to say "no" having an impact on work load.
- Interpersonal conflicts
- Accumulation of change
- Feeling undervalued at work, not appreciated
- Communication difficulties

Home related stress

- Inadequate personal time
- Juggling work and home commitments
- Arguments with partner

Internal coping mechanisms

- Inability to be assertive and say "no"
- Low levels of assertiveness, high level of agreeableness, possibly associated with:
    - Wanting to be liked, don't want to upset others
    - Lack of confidence in own judgements
    - Insecurity
    - Fear of appearing lazy

2) Transactional models and reversal theory: can these explain the results?

The theories introduced in chapter one will now be revisited in an attempt to find an explanation for the results obtained in this study.

a) Reversal theory

Reversal theory is advocated by Svebak and Apter (1997) as an explanation for stress. They maintain, that it is the emotions experienced which lead to anguish. The cause of these feelings is not addressed. Negative emotions such as anxiety; boredom; anger; sullenness; humiliation; shame; resentment and guilt, lie at the "negative" end of emotional spectrums. The individual experiencing these feelings is presented with a desire to seek out the more "positive" end of the spectrum for each emotion. It is this resulting unease and restlessness, the desire to seek out an alternative, which causes internal stress within the individual.

There is evidence of these negative emotions in the responses gained by this study. It is possible, that these negative emotions are a cause of, or contributing factor to the level of stress found, for example, boredom. 31% of the group scoring moderate or high on the stress questionnaire, stated that they "were bored at work". 21% of the stressed group had interpersonal conflicts with colleagues, and it may be argued that this is a manifestation of their anger. However, the questionnaires used in this study have not really examined the emotions of the respondents. Nonetheless, it seems unlikely that reversal theory is a satisfactory explanation alone for what is happening in this occupational group.

b) The transactional model

The transactional model of stress, conceptualised by Lazarus and Folkman (1984), stressed the interaction between the individual and their environment. The model has been explained fully in chapter one. However, it may be a plausible explanation for the results found in this study, and so will be addressed in further detail here.

The theory highlights the importance of *perception* when an individual is appraising a potentially stressful situation. It is this initial assessment that underpins coping ability. The risk of failure will also influence ability to cope. The transactional model suggests that individual differences in the style of appraisal and coping are central to the level of stress that the person may experience. For example, it may be that people who have a neurotic tendency, appraise events more negatively, and so adopt ineffective coping strategies (Gallagher 1990). Neuroticism is often related to pessimism and such beliefs may contribute to sensitivity to stress (Matthews and Deary 1998). Personality traits will be considered in more details later; however, it must be remembered that this study has found that *the perception of stress* in this particular occupational group is far greater than the level of stress measured using Fontana's questionnaire. The transactional model outlined above, may provide one possible explanation for this finding.

3) Individuality as an explanation for stress

As introduced in chapter one, there are five recognised dimensions of personality. Although individuality and personality traits have not been measured directly by this study, and so caution must be used when drawing any conclusions, the responses to several questions provide some insight into the individuals' personality. In the light of the results found in this study, each of these five dimensions will now be revisited in an attempt to analyse the results found.

a) Neuroticism and emotional distress

There is no doubt that neuroticism is the personality trait that is most strongly and consistently related to various symptoms of stress (Matthews and Deary 1998). Neuroticism predicts unpleasant moods and negative cognitive states, and is clinically related to anxiety

and depression (Clarke, Watson and Mineka 1994). Neuroticism is also associated with sexual problems and guilt (Eysenck 1976). Interestingly, 60% of the stressed group felt "unable to get up late at the weekends without feeling guilty", and 10% of them confessed to sexual problems. Neuroticism has been linked with difficulties in relationships, a predisposition to marital problems (O'Leary and Smith 1991), and hypochondriacal insecurity (Pervin and John 1997). It would seem that this evidence, and the theory outlined above (transactional model), offer possible reasons for the high levels of stress, and perceived stress. Stress levels may be exacerbated by a tendency towards neuroticism. However, as neuroticism itself was not directly measured in this study, caution must be exercised when discussing this issue.

When considering the *perception* of stress, again personality traits will undoubtedly predispose some individuals to perceive specific situations as threatening and stressful. However, in the light of the description of neuroticism above, an interesting feature of the results is apparent. Exclusively, in the personal lives of those who *perceived* them selves to be stressed there were several aspects that did not appear in the group who did not feel stressed. (Divorce, separation, sexual difficulties, moving house, increasing arguments with partner). In general, these experiences are more commonly associated with people who have neurotic tendencies.

b) Extraversion – introversion

As stated in chapter one, extraverts are more likely to seek stimulation and they are usually optimistic and act on impulse. Organisational change may be a challenge rather that a threat. Introverts avoid risks, and would view major organisational change as an enormous risk to them-selves. Introversion and extraversion have not been measured in this study. It is possible that those who coped better with the changes imposed upon them were more

inclined to navigate towards the extraversion end of the spectrum. This would be an area for further investigation.

c) Conscientiousness

A low score for conscientiousness, as explained in chapter one, would result in a worker who was aimless, unreliable, lazy, careless, lax negligent, weak-willed and hedonistic. Whilst not advocating that any of the staff who participated in this study could be described in this negative way, the outline above gives two extreme ends of a spectrum. Each individual will fall somewhere along that spectrum, and a tendency towards the non-conscientious end may have consequences for the way in which that individual responds to major organisational change and stressful situations. Furthermore, when working closely in small teams, work performance is scrutinised by fellow colleagues, and if two people from opposing ends of the continuum were in the same team, the potential for conflict and possible exploitation would be immense. Interpersonal conflict has certainly been a feature of the results here. Further enquiry into the prevalence of this trait amongst the subjects of this study may provide evidence to explain the disparity of coping ability amongst the various occupational groups.

d) Agreeableness

This tendency has already been introduced and discussed above in connection with "an inability to say no". It is quite apparent from the results of this study, that the highly stressed group all admitted to an inability of say "no" and therefore it may be concluded that they possess the trait of "agreeableness".

e) Openness to experience

Openness to new experience and change will indisputably have an influence on the approach that a midwife adopts when faced with a new challenge and changing circumstances. Unfortunately, this trait has not been directly measured by this study.

When these personality traits are combined with the transactional model, it is easy to see how some people cope better with change and stress than others do. Collectively, they provide a plausible explanation for the level of actual and perceived stress amongst this occupational group. A further point of interest, is that the level of sickness due to stress on the department of medicine for the elderly, is constantly very high (chart three, appendix 6). Here, task orientated work is more prominent and innovation less frequent, the atmosphere tends to be relaxed and calm, and comparatively reserved. In contrast, the sickness level due to stress in theatre and orthopaedics is consistently low. In these areas, work is often fast, innovative, tense, and considerably more acute.

It may be that the people working in the department of medicine for the elderly, are not in the right environment to suit their personality. On the other hand, the staff in theatre, whilst under greater pressure and in a more intense atmosphere, have personalities which not only cope but also probably thrive in that situation. Hence, the potential stress level is higher in the acute setting, but the personality characteristics of the staff working there enable then to cope.

f) Type A personality

Chapter one introduced an explanation of "type A" personality. To summarise, type A individuals are highly competitive, hard working, ambitious individuals. They are often

impatient and hostile if distracted from the job in hand. If a type A person were undertaking a boring, monotonous, slow job, this would result in a greater degree of anxiety and tension for them. Type A personalities thrive on change and challenge. It may be that the midwives who are not coping well with the changes are type B personalities, but as this trait has not been measured here, this is purely speculation. However, work on such single traits should be integrated with more general structured models of traits. Looking at one personality aspect in isolation may be naïve.

g) Anxiety

Studies have shown that people with high anxiety levels suffer from more role conflicts than people with a more relaxed approach to their life. Anxiety prone individuals experience role conflict more acutely and react to it with more tension than people who were less anxiety prone; and more flexible individuals respond to role conflict with less feelings of tension than their more rigid counterparts (Warr and Walls 1975). Measuring anxiety levels amongst the subjects of this study may account for some of the results found.

A combination of the above traits will result in a mosaic personality. This will influence both perception and behaviour. In turn, there will be an impact on perception and experience of stressful situations. (See appendix five)

4) The effects of stress analysed

Lovallo (1997) explained that it is not just physical environmental threats but also hypothetical emotional torment, which leads to psychological distress. As a consequence of the biological stress response, a propensity to circulatory and digestive problems, depression, immunosuppression, growth impairment and psychological dysfunction result.

As detailed earlier (chapter one) the effects of stress can be categorised under three broad headings:

i. Psychological symptoms

ii. Physical symptoms

iii. Behavioural symptoms

a) Psychological symptoms

Anxiety and depression are included here, also boredom, frustration, isolation and resentment. Job dissatisfaction is common. It has already been stated that boredom was not a common feature of the stressed group. However, 28% reported that the majority of times, they did not feel satisfied with what they have achieved at he end of their working day. 48% hardly ever look forward to going into work. 26% feel that their superiors actively hinder them at work. This may in fact be true, or the feeling may be a symptom of resentment. There is some evidence of psychological symptoms of distress, but hey are by no means a prominent feature of the moderate and severe stress group.

b) Physical symptoms

Cardiovascular, digestive and immune disorders are amongst the plethora of physical symptoms that have been associated with distress. Chart three (appendix 6) clearly shows that all of these features are prominent reasons for absence due to sickness. Further more, in the moderate and severe stress groups, the incidence of indigestion and poor appetite was 29%, unexplained faintness and nausea 7% and tearfulness 24%.

c) Behavioural symptoms

This includes absence from work, work avoidance, aggression, eating disorders and drug / alcohol misuse. These symptoms were not examined by the questionnaires used. Overall, it would seem that much of the sickness within the unit could be related to issues of stress.

To conclude:

Many midwives experiencing moderate and severe stress as measured by the Fontana instrument, are experiencing the psychological, physical and behavioural symptoms associated with stress.

5) The organisation: and the part it has played here

Williams (1998) attributed psychological illness amongst N.H.S. staff, to be reliant upon managerial style, the size of the organisation, communication strategies, support for staff, autonomy and the opportunity for flexibility amongst working practices. Chart two and table two (page 32) may support the notion that managerial style is influential. Indeed, this may account for the variance in sickness levels in other hospital departments.

The difference between *flexibility* amongst working practices, which is reported to reduce stress, and *unpredictability* which is reported to increase stress, is basically one of control. Nevertheless, when it comes to maternity care, it is neither the staff nor the organisation who can control the flow or nature of the work!

Chapter five clearly illustrated the importance of organisational support. Even though a quarter of the group who *did not feel stressed* scored moderately high on their stress questionnaires, they believed that it was support from the organisation that helped them. Likewise, in the *moderate and severe* stress group, 74% feel inadequately valued at work. In all replies, support from the organisation was deemed important in helping midwives to cope with the stressful experience they encounter.

The appropriateness of the organisations initiatives

Stress management and awareness combined with debriefing and counselling was only thought to be helpful in a total of 14% of replies. Staff themselves reported that the main aspects that would help them were support from colleagues and the organisation.

Stress in the workplace is "plaguing" modern organisations, having an impact on their profits, productivity, standards, staff retention, innovation and day to day managerial problems. As such, we may see an influx of human resource professionals such as stress counsellors, staff support officers, "stress-buster" facilitators and stress management consultants. Whether we need them, or they will make any difference will depend very much on the individuals, the organisation, and the personalities of the people involved. Treating every one with respect and valuing their contribution – not just from management to employee, but also employees between themselves, will go a long way to resolve many of the current stress issues in modern organisational culture.

Counselling facilities and stress management sessions have been advocated by some studies (Borrill 1996); however, in this case only 14% of respondents stated that this would be of use. Stress awareness sessions have been commissioned for the staff, and have been provided by an outside agency. Places were available free of charge for sixty staff in 1999. In reality, the places were rarely filled, with some sessions only half full.

CHAPTER SEVEN

Conclusion

The study set out to examine stress in an occupational group, and ascertain whether perceived *occupational stress* actually originated from sources not connected to the working environment. In order to do this, three questionnaires concerning demographic data, stress analysis and life changes, were completed by midwives within the unit under examination.

The reason for this line of enquiry was as follows. Subsequent to a series of large organisational changes, there was a perception amongst the staff that a high level of stress existed due to the modifications that had taken place.

The study found that 47% of the midwives scored very low on a stress analysis questionnaire, 47% scored moderate and 6% scored high. Life change scores revealed that a quarter of the staff had a score that may predispose to illness within the near future. The main reasons for stress can be categorised as either occupational, home related or personal.

Occupational stress was often linked to personality of the individual, with extra work being accepted for fear of appearing lazy. Interpersonal conflicts were also common. The accumulation of changes that have taken place certainly seem to have affected some individuals adversely, and the sharp rise in sickness due to stress since the changes were introduced corroborates this. Many work related stresses originate from ineffective communication strategies between the same grades of staff.

Home related stress often results as a consequence of trying to juggle the demands of work and home at the same time. This, together with arguments with partners and

inadequate personal time leave the midwife with a considerable degree of anguish. Having children at home appears to increase the *perception* of stress (page 47).

Interpersonal coping mechanisms seem to be the greatest influential factor in this study. Some staff have undergone a great deal of life changes and yet are not, or do not perceive themselves to be stressed. Others, in contrast, have undergone relatively fewer life changes and yet seem unable to adapt and cope. The analysis of personalities in this group may reveal a degree of neuroticism, agreeableness and anxiety amongst the stressed group.

The transactional model offers a plausible explanation as to why coping mechanisms between the midwives vary so much. The model highlights the importance of considering the individual in the light of their environment when looking to explain distress. The responses from many of the midwives support the notion that there may be a high level of neuroticism amongst some of them, and this in turn could be affecting their ability to interact with environmental changes.

The Holmes and Rahe assessment of life changes gives a crude analysis, but assumes that the same change results in the same amount of stress for each person. This, of course, may not be true. The Fontana stress analysis questionnaire, again gives a basic crude guide to the level of stress. Both were quick and easy to complete, and this may have accounted for a fairly high level of compliance. They have provided an overview of the current situation within the unit, but are not accurate enough to be interpreted as diagnostic tools.

Whilst the study seems to support the notion that change is related to stress, and in turn, stress is related to sickness, this is not always the case. Major change or the accumulation of small changes does appear to increase stress levels in some people. However, the amount of change needed to produce a stress response will vary from person to person in relation to the individual's coping mechanisms. Change doesn't always mean

stress. Perception is important. As perception is directly related to personality, it can be concluded that the single most important influencing factor when determining stress levels, is the personality of the individual concerned. Stress is related to personality far more closely than it is related to change. Admittedly, change, interpersonal relationships, home life and the organisation all have their part to play. Nevertheless, it is the individual herself and how she perceives and copes with situations; how she responds to stimuli, that is the vital component.

Organisational support influences the *perception* of stress more than it influences the level of stress itself. The perception of stress is greater than the reality, and again this fits with the suggestion of a presence of a degree of neurotic tendencies and inadequate coping mechanisms. Although part time staff may feel more stressed than fulltime staff, the reality is not so. Certain life events also seem to increase the perception of stress. These are moving house, divorce, sexual problems and the death of a close friend.

Team midwives are more stressed than core midwives. This may be because the amount of change that they have experienced is far greater. It may also be because of the variation in their working day being perceived as *unpredictable* as opposed to *varied.* Again, the issue of perception returns. Midwives who perceive them to be stressed feel unsupported; those who do not perceive themselves to be stressed feel supported. This is irrelevant of their actual stress score. Personal expectations of colleagues and the organisation, life and fellow family members will undoubtedly influence stress perception.

Children are not significant factors in influencing the stress experienced in this group. Some life factors however, do seem to increase the perception of stress. These include having a partner, working in a team and the life events mentioned above. Having children at home may also influence the perception of stress (p47).

A repeat of this study periodically, and a comparison of the results with the sickness levels due to stress would be of great interest. Life event scores compared to the sickness levels of the midwives would also be an area of importance. This would validate the study completed here, and provide insight into the predictive factor of both Fontana and Holmes and Rahe. If it proved to be the case that sickness levels could be predicted in this way, then the impact for organisational planning would be immense.

Whilst many organisations are currently adopting worker support schemes and stress counselling facilities, the group here did not believe that this would help. Indeed from the evidence of the sickness records here, it doesn't appear to be helping. Maybe what the employees really need is a greater input into personality awareness, understanding other people's reactions, raising individual self-confidence and assertiveness training and coping mechanisms. The concept of stress is convoluted to explain, complex to evaluate, hopeless to define or measure and difficult to predict. Only a multi-faceted approach to the problem can hope to illuminate the researcher with any answers.

Appendices

Appendix 1

Dear colleague,

You are invited to take part in a research project to analyse the extent and origin of stress amongst midwives. It would be very much appreciated if you could complete the enclosed anonymous questionnaire and return it to the Clinical Practice Research Unit (C.P.R.U.) at Arrowe Park Hospital in the envelope provided as soon as possible.

It is hoped that the results can be used to help midwives who may be stressed; assisting them to cope, and reduce the stress that they may experience as a result of their working life. Please feel free to use the space below to make any further comments, not covered by the questionnaires.

If you feel that exploring these issues causes you difficulties, or you would like to discuss your stress related problems with some-one, help is available via the occupational health department. Assistance can also be found from the staff support counsellor, who can be contacted via the personnel department.

Once completed, a summary of the results of this research project will be available from the Clinical Practice Research Unit. However, all replies will remain confidential and anonymous. No attempt will be made to identify individuals from the responses that they have given.

Thank-you for taking the time to take part in this study.

Appendix 2

About you

This section is designed to give basic information about you. All information is confidential.
Please tick the box / boxes in each of the following sections. Thank-you.

Age group

- ❒ under 25yrs
- ❒ 25 – 29yrs
- ❒ 30 – 34yrs
- ❒ 35 – 39yrs
- ❒ 40 – 44yrs
- ❒ 45 – 49yrs
- ❒ 50 and over

Family commitments

- ❒ single/separated
- ❒ married or living with partner

Do you have any children living at home?

- ❒ yes
- ❒ No

Work Commitments

- ❒ work full time
- ❒ work part time

Job title

- ❒ Team midwife
- ❒ Core midwife

Do you think you are stressed?

- ❒ yes
- ❒ no

if yes, what do you think causes your stress, (tick all that apply)

- ❒ conflict between work and home commitments
- ❒ conflict with work colleagues
- ❒ your work load
- ❒ insufficient knowledge to cope with changes at work
- ❒ your personal circumstances / home life / life style
- ❒ other .....(please state)

What do you think would help midwives to cope with their stress? (tick all that apply)

- ❒ improved support from family and friends
- ❒ improved support from work colleagues
- ❒ improved support from your organisation / management
- ❒ increased flexibility in your working times
- ❒ debriefing facilities / staff counsellor
- ❒ stress management / awareness sessions
- ❒ other .....(please state)

Appendix 3

About your stress

1.Two people who know you are discussing you. Which one of the following statements would they be most likely to use?

- ❒ she is very together, nothing seems to bother her
- ❒ she is great but you have to be careful what you say to her at times
- ❒ something always seems to be going wrong with her life
- ❒ I find her very moody and unpredictable
- ❒ The less I see of her the better

2. Are any of the following, common features of your life?

- ❒ feeling you can seldom do anything right
- ❒ feelings of being hounded, trapped or cornered
- ❒ indigestion
- ❒ poor appetite
- ❒ difficulty in getting to sleep at night
- ❒ dizzy spells or palpitations
- ❒ sweating without exertion or high air temperature
- ❒ panic feelings when in crowds or confined spaces
- ❒ tiredness or lack of energy
- ❒ feelings of hopelessness ('what's the use of anything')
- ❒ faintness or nausea sensations without any physical cause
- ❒ extreme irritation over small things
- ❒ inability to unwind in the evenings
- ❒ waking regularly at night or in the early mornings
- ❒ difficulty in taking decisions
- ❒ inability to stop thinking about problems or the days events
- ❒ tearfulness
- ❒ convictions that you just can't cope
- ❒ lack of enthusiasm even for cherished interests
- ❒ reluctance to meet new people and attempt new experiences
- ❒ inability to say "no" when asked to do something
- ❒ having more responsibility than you can handle

3. Are you *more* or *less* optimistic than you used to be, or about the *same?*

❒ more ❒ less ❒ about the same

4. Do you enjoy *watching* sport?

❒ yes ❒ no

5. Can you get up late at weekends if you want, without feeling guilty?

❒ yes
❒ no

6. Within reasonable professional and personal limits, can you speak your mind to:

a) your boss?	❒ yes	❒ no
b) your colleagues?	❒ yes	❒ no
c) members of your family?	❒ yes	❒ no

7. Who usually makes the important decisions in your life?

❒ yourself
❒ some-one else

8. When criticised by superiors at work, are you usually:

❒ very upset
❒ moderately upset
❒ mildly upset

9. Do you finish the working day feeling satisfied with what you have achieved:

❒ often
❒ sometimes
❒ only occasionally

10. Do you feel most of the time that you have unsettled conflicts with colleagues?

❒ yes
❒ no

11. Does the amount of work you have to do exceed the amount of time available:

❒ habitually
❒ sometimes
❒ only very occasionally

12. Have you a clear picture of what is expected of you professionally:

❒ mostly
❒ sometimes
❒ hardly ever

13. Would you say that generally you have enough time to spend on yourself?

❒ yes
❒ no

14. If you want to discuss your problems with some-one, can you usually find a sympathetic ear?

❒ yes
❒ no

15. Are you reasonably on course towards achieving your major objectives in life?

- ❒ yes
- ❒ no

16. Are you bored at work:

- ❒ often
- ❒ sometimes
- ❒ never

17. Do you look forward to going into work:

- ❒ most days
- ❒ some days
- ❒ hardly ever

18. Do you feel inadequately valued for your abilities and commitment at work?

- ❒ yes
- ❒ no

19. Do you feel adequately rewarded (in terms of status and promotion) for your abilities and commitment at work?

- ❒ yes
- ❒ no

20. Do you feel your superiors:

- ❒ actively hinder you in your work
- ❒ actively help you in your work

21. If, ten years ago, you had been able to see yourself professionally as you are now, would you have seen yourself as:

- ❒ exceeding your expectations
- ❒ fulfilling your expectations
- ❒ falling short of your expectations

22. If you had to rate how much you like yourself on a scale from 5 (most like) to 1 (least like), what would your rating be?

- ❒ 1
- ❒ 2
- ❒ 3
- ❒ 4
- ❒ 5

Appendix four

About your life

Please tick all of the events that have happened **to you** in the **past six months**:

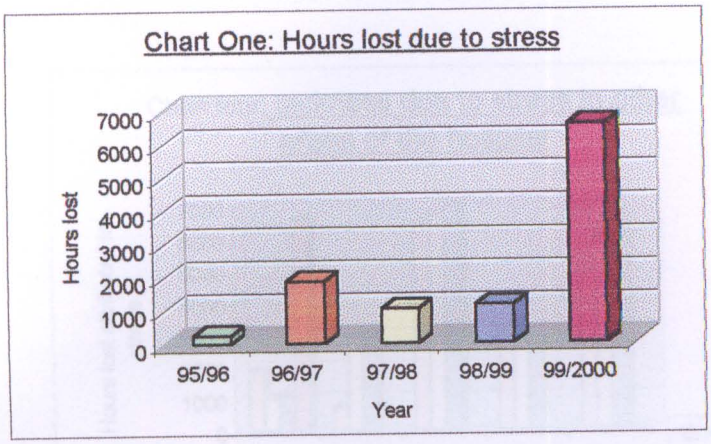
- ❑ death of a partner
- ❑ divorce
- ❑ separation from partner but not divorce
- ❑ jail sentence
- ❑ death of a close family member
- ❑ significant illness or injury to yourself
- ❑ your marriage
- ❑ sacked from work
- ❑ reconciliation with a partner
- ❑ retirement
- ❑ significant ill health of family member
- ❑ your pregnancy
- ❑ sexual problems / difficulties
- ❑ addition of new family member
- ❑ change in your financial state
- ❑ death of a friend
- ❑ change to a different *type* of work
- ❑ increased arguments with partner
- ❑ take on a large mortgage
- ❑ mortgage or loan foreclosed
- ❑ change in responsibilities at work
- ❑ child leaves home
- ❑ trouble with in-laws
- ❑ outstanding personal achievement
- ❑ partner begins new job / ends job
- ❑ child begins / ends schools
- ❑ change in living conditions
- ❑ change of personal habits
- ❑ trouble with boss / employer
- ❑ change in working hours or condition
- ❑ change in residence
- ❑ child changes school
- ❑ change in social activities
- ❑ change in sleeping habits
- ❑ change in number of family get togethers
- ❑ change in eating habits
- ❑ holiday
- ❑ christmas
- ❑ minor violations of the law

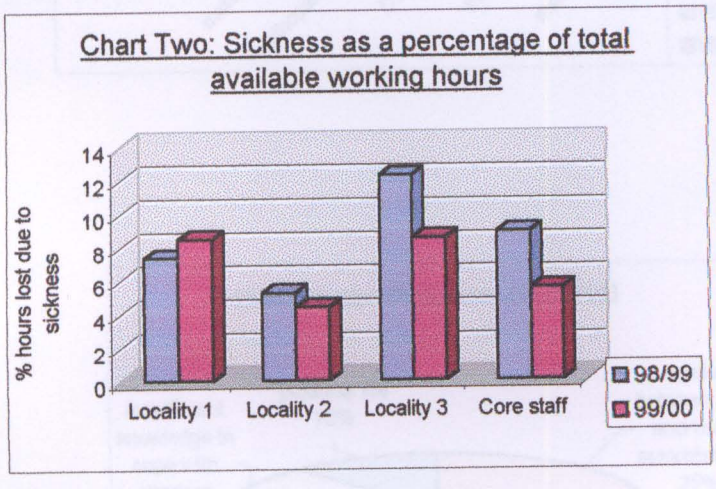
Appendix Five

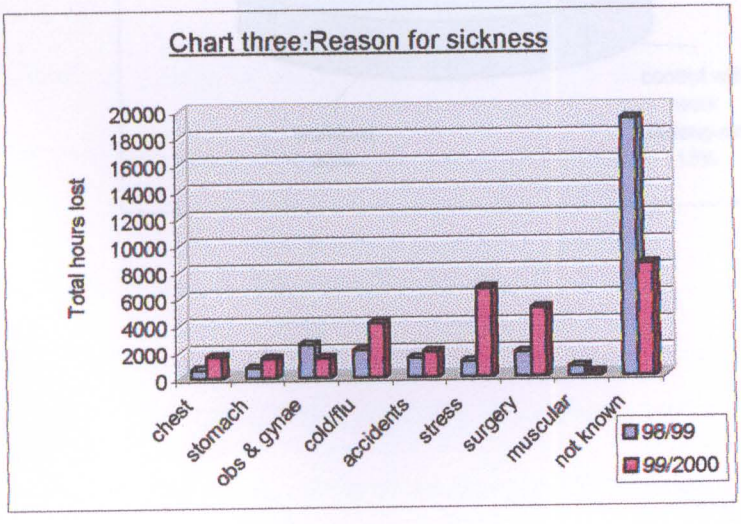
Drawing by Gary Larson; © 1990 FarWorks, Inc./ Dist. by Universal Press Syndicate.

The four basic personality types

Appendix Six







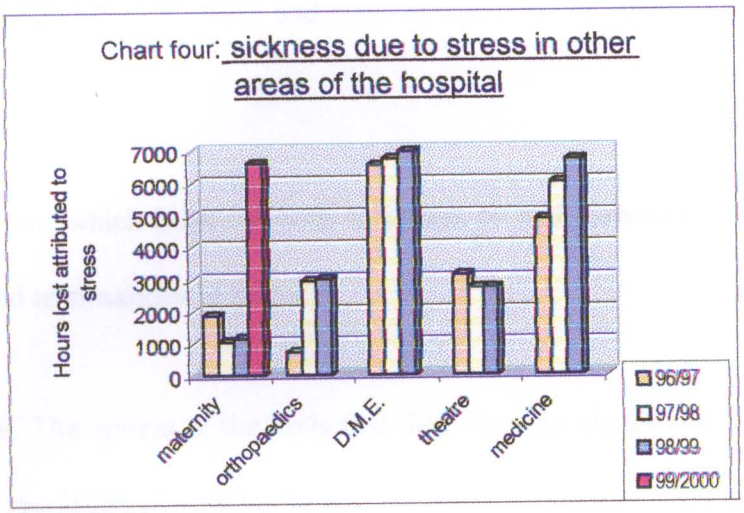


Chart four: sickness due to stress in other areas of the hospital
Hours lost attributed to stress
7000
6000
5000
4000
3000
2000
1000
0
maternity
orthopaedics
D.M.E.
theatre
medicine
96/97
97/98
98/99
99/2000

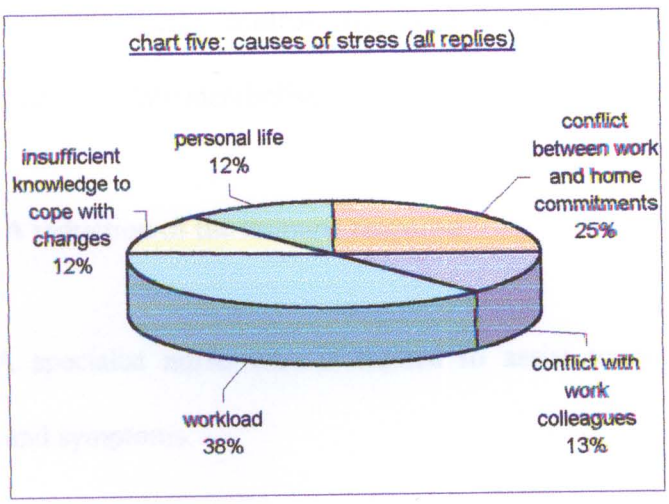


chart five: causes of stress (all replies)
insufficient knowledge to cope with changes 12%
personal life 12%
conflict between work and home commitments 25%
conflict with work colleagues 13%
workload 38%

Glossary of terminology

Catecholamine: A hormone produced by the adrenal gland. The effect of catecholamine includes an increase in blood pressure and heart rate at times of stress. It is also believed to have an influence on mood.

Cortisol: A hormone, which helps the body to access fat and carbohydrate, to produce fuel in order to respond to situations of stress.

Endocrine system: The system of the body that describes the glands and the hormones they produce, and the regulation of such hormones.

Hormone: A chemical that transfers information and instructions between cells. Hormones regulate growth and development, control the functions of various tissues, support reproductive functions and regulate metabolism.

Immunosuppression: A reduction of the immune response

MacMillan Nurse: A specialist nurse who is trained to assist terminally ill patients in controlling their pain and symptoms.

Metabolism: The breakdown of food to produce energy

Midwifery led care: The midwife is the person who plans, orchestrates **and** delivers the whole episode of care. There is no involvement from an Obstetrician.

Team midwifery: midwives working in "groups" to provide total care for a defined case load of women.

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